APPENDIX A

REVISED (AUGUST 2003) NOTICE OF PREPARATION AND RESPONSES

Ernest Orlando Lawrence
Berkeley National Laboratory

One Cyclotron Road
Berkeley, California 94720

August 6, 2003

State of California
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

Revised Notice of Preparation
Draft Focused, Tiered Environmental Impact Report

Project Title:	Construction and Operation of Building 49
State Clearinghouse No:	2003062097
Project Location:	Lawrence Berkeley National Laboratory
Lead Agency:	University of California
County:	Alameda County

Revised Project Description

On June 16, 2003, Lawrence Berkeley National Laboratory (LBNL or Berkeley Lab) filed a Notice of Preparation (NOP) to prepare an Environmental Impact Report (EIR) for the proposed construction and operation of Building 49 and the G-4 Parking Lot Project. As identified in the NOP and as stated during its June 30th scoping meeting, LBNL pledged to examine several alternatives to the proposed Project and to refrain from commiting to any particular courses of action prior to undergoing the California Environmental Quality Act (CEQA) process. This process includes providing open scoping, soliciting of public and agency opinions, and examining the CEQA analyses under preparation by independent experts.

Having undergone this scoping process, Berkeley Lab has revised the project description to exclude using Building 49 excavation soil to construct the G-4 parking lot, and instead will haul the soil for disposal off-site. Therefore, the forthcoming EIR will drop consideration of the proposed G-4 parking lot, and will instead include as part of the proposed Project the shipment of soils off-site to be used as clean fill for landfill cover or construction projects elsewhere. Please refer to the attached Initial Study for a more detailed explanation of the project description and the forthcoming EIR.

LBNL thanks the many members of the public who took the time to review the project scoping materials, who attended the June 30th scoping meeting, and who responded verbally and in writing with their opinions.

Scoping Comments

The University of California[1] will be the Lead Agency and will prepare a focused, tiered Environmental Impact Report for the proposed construction and operation of Building 49 for Lawrence Berkeley National Laboratory, located in the cities of Berkeley and Oakland, Alameda County, California. A brief summary of the project description follows, along with a description of alternatives to be considered (Attachment A). A detailed project description and preliminary discussion of environmental issues, along with project graphics, is included in the attached Initial Study (Attachment B).

In response to the original June 16, 2003 NOP, LBNL received comments on both the Building 49 and the G-4 parking components of the Project. As a result of the current changes to the project description, those comments regarding the G-4 parking lot component are no longer relevant to the analysis. Comments regarding the Building 49 component of the Project, however, will continue to be considered in the preparation of the EIR. Interested Agencies and individuals are invited to submit comments based on the revised Project described herein and in the Initial Study.

We request your agency's views as to the scope and content of the environmental information germane to your agency's statutory responsibilities pertinent to the proposed Project. Your agency will need to use the EIR when considering any applicable permit(s) or other approval(s) for the proposed Project.

Your response should be sent not later than 30 days after receipt of this notice to be considered for the EIR scope and analysis. The name of a contact person within your agency should be included with your response.

Please send your response to: Jeff Philliber, Environmental Planning Coordinator
Lawrence Berkeley National Laboratory, MS 90K
One Cyclotron Road, Berkeley, California 94720

If you have any questions about this process, please contact Jeff Philliber, EIR Coordinator for this Project, at the above address or at (510) 486-5257.

Signature: _____ -FOR- _____ Date: August 5, 2003

Laura Chen, Chief Facilities Planner
Lawrence Berkeley National Laboratory

[1] LBNL is a multi-program U.S. Department of Energy (DOE) research laboratory operated and managed by the Regents of the University of California since 1940. LBNL is a geographically distinct entity and operates independently from UC Berkeley.

Attachments: Summary Project Description and Scope of Focused Tiered EIR
Public Scoping Meeting Announcement
Initial Study and Project Maps/Graphics

cc. State Agencies

State Clearinghouse
Dr. Alan C. Lloyd, CA Air Resources Board
Gary Adams et al, Chief, CalTrans
Sal Ciriello et al, Facility Permitting, CA EPA, Department of Toxic Substances Control
Robert C. Hight, Director, CA Department of Fish and Game
David Kennedy, Director, CA Department of Water Resources
Winston Hickox, Secretary, CA Environmental Protection Agency
Ms. Heidi Temko et al, CA State Water Resources Control Board, Division of Clean Water Programs
Ms. Mary D. Nichols, Secretary, CA Resources Agency
Mr. Edgar Bailey et al, Chief, CA Department of Health Services, Radiological Health Branch
Mr. Lawrence Kolb et al, Executive, CA Regional Water Quality Control Board

Federal Agencies

Mr. Michael Bandrowski et al, U.S. Environmental Protection Agency, Region 9, Office of Radiation and Indoor Air
Wayne White, Supervisor, U.S. Fish and Wildlife Service Enhancement Division, Sacramento Field Office
Mr. Richard Nolan, U.S. Department of Energy, Berkeley Site Office
Janet M. Neville, U.S. Department of Energy, NEPA Compliance Officer
Mr. Roger Little, U.S. Department of Energy

Regional/County Agencies

James Sorenson et al, Director, Alameda County Planning Department
Andy Parsons, Contra Costa County Department of Health Services
Mr. Pat O'Brien, East Bay Regional Park District

City of Berkeley

Ms. Sherry M. Kelly, City Clerk
Mr. Weldon Rucker et al, City Manager

City of Oakland

Ceda Floyd, City Clerk's Office
Jane Brunner, Councilmember City of Oakland, District 1
Mr. Robert Bobb, Office of the City Manager

University of California

Alan Waltner, UCOP et al, General Counsel
Howard Hatayama, Sr. VP, UCOP, Laboratory Administration

UC Berkeley

Vice Chancellor Horace Mitchell et al, Business and Administrative Services
Tom Lollini, Director, Physical and Environmental Planning

Attachment A
Revised Summary Project Description and Scope of Focused Tiered EIR

The Building 49 project site is located on a west-facing hillside, between Cyclotron Road and East Road, on the western side of the LBNL site, within the city limits of Berkeley. A detailed discussion of project description, location, and the potential environmental effects is contained in the attached Initial Study. The proposed Project has been revised to exclude the construction of the G-4 Parking Lot with excess project soils in favor of hauling soil off-site for disposal or reuse.

Building 49

Building 49 would be a six-story, 65,000 sq. ft. office building constructed at LBNL by a third-party developer who would lease the building to the University for LBNL's use. It would provide "decompression" office space for up to 240 staff who already work at LBNL under overcrowded conditions; it would not change the population at LBNL and would cause no new automobile commute trips. No laboratory research or space would be included in this building; accordingly, no hazardous laboratory chemicals or radionuclides would be emitted.

The approximately 1.08-acre project site is currently undeveloped and is located on the hillside east of Cyclotron Road, near LBNL's main entrance, and adjacent to the Building 50 complex. Building 49 construction would take place from approximately Spring 2004 to Fall 2005. The Project would require excavation, construction of new infrastructure, and site re-vegetation. The site has no record of soil contamination or other past activities that might be indicative of contamination. Approximately 19,000 to 26,000 cubic yards of soil would be excavated from the site for construction of the proposed building. The site is primarily vegetated with eucalyptus trees and non-native grassland. No Federally or State listed species of concern are known to exist on the site.

Excavated soils would be shipped off-site for disposal or reuse by an approved area landfill or construction site. The actual site would be determined at the time of excavation because the actual demand for soil is generally variable. Under the revised project description, soil would be shipped in amounts of approximately 12 cubic yards per truck, down Cyclotron Road, west on Hearst Avenue, south on Oxford or Shattuck Avenues, and west on University Avenue to Interstate 80. Under the maximum soil excavation scenario of 26,000 cubic yards, off-site disposal of soil would require approximately 2,200 round truck trips.

Scope of Environmental Impact Report

Environmental issues that will be analyzed in detail in this focused, tiered EIR include: aesthetics; air quality; biological resources; cultural resources; geology, soils, and seismicity; hazards and hazardous materials; hydrology and water quality; land use and planning; noise; public services; transportation and traffic; utilities and service systems; and cumulative impacts. Environmental issues to be focused out of the EIR are: agricultural resources; mineral resources; population and housing; and recreational resources.

The EIR will be tiered off of LBNL's 1987 Long Range Development Plan EIR, as amended, and will incorporate all applicable mitigation measures from that EIR, as appropriate.

Alternatives

The EIR will identify six possible alternatives to the proposed Project. In addition to a No Project Alternative, the following alternatives for Building 49 construction will be considered for analysis in the EIR:

Off-site lease(s): An equivalent amount of off-site space would be leased on the UC Berkeley campus, in the City of Berkeley, or in other nearby cities.

Alternate On-site Location(s): One equivalent-sized or a series of smaller buildings with equivalent total space would be constructed at different locations on-site.

Smaller Building: A smaller or differently designed building would be constructed at the presently proposed Project site. This building could include a smaller profile or footprint to reduce impacts identified in the EIR, as appropriate.

The following alternatives for disposal of excavated soil will also be considered in the EIR:

Soil Disposal On-site: Single or multiple alternate sites would be found at Berkeley Lab to distribute the up to approximately 26,000 cubic yards of excavated soil.

Soil Disposal at Off-site Landfill--Grizzly Peak Route: 26,000 cubic yards of soil would be trucked out in up to approximately 2,200 round truck trips to a nearby use or area landfill. The trucks would depart through the Grizzly Peak gate, up to Centennial Drive, to Grizzly Peak Blvd., to Fish Ranch Road, to Highway 24, to either Interstate 580 or Interstate 880.

Ernest Orlando Lawrence
Berkeley National Laboratory

One Cyclotron Road,
Berkeley, California 94720

August 6, 2003

Revised Initial Study

I. PROJECT INFORMATION

Project Title: **Construction and Operation of Building 49***

SCH Number: 2003062097

Lead Agency: University of California, Lawrence Berkeley National Laboratory

Address: One Cyclotron Road, MS 90K, Berkeley, California 94720

County: Alameda County

Contact Person: Jeff Philliber
Environmental Planning Group
Lawrence Berkeley National Laboratory
One Cyclotron Road, MS 90K
Berkeley, California 94720

Phone Number: (510) 486-5257

*--Referred to herein as "the proposed Project" or "the Project."

II. PROJECT DESCRIPTION

This Initial Study has been revised to reflect that the proposed project description no longer includes construction of the G-4 parking lot with surplus excavated soil from Building 49. Instead, soil would be hauled off-site in trucks for disposal or reuse elsewhere.

Description of Proposed Project

Building 49

The University of California (UC) proposes to enter into an agreement with a third-party developer ("the Developer") to construct a six-story, 65,000 sq. ft. office building at the Lawrence Berkeley National Laboratory (LBNL, or "Berkeley Lab"). UC would execute a

ground lease for the Site with the Developer. The Ground Lease would allow the Developer to finance, design, build, own, and maintain the building. UC would lease all of the space in the Office Building from the Developer for use by LBNL through a Rental Agreement.

LBNL would use the building for office and meeting space. The proposed office building would include no laboratory space, and no laboratory research would be conducted in the building. The proposed Project would "decompress" existing staff from other areas of Berkeley Lab that are currently overcrowded or that do not meet LBNL workspace standards for office workers (i.e., 135 net square feet of primary office space per person). The proposed Project would not affect the population of the LBNL hill site—no new employees would be added to LBNL's population as a result of this proposed Project.

The approximately 1.08-acre project site is currently undeveloped and is located on the hillside east of Cyclotron Road, near LBNL's main entrance: the Blackberry Gate entrance on Cyclotron Road (see Figures 1 and 2). It is adjacent to the Building 50 complex to the east, Cyclotron Road and the Building 65 complex to the west, the main LBNL shuttle bus stop to the north, and an exterior stairway and undeveloped hillside further to the south. The proposed Building 49 would be occupied by up to approximately 240 current LBNL employees and would include approximately ten on-site service, visitor, and handicapped parking spaces. The proposed office building would be accessible from both Cyclotron Road at the entry floor level on the west side of the building, and from East Road (a.k.a. "Road E") at the sixth floor level on the east side of the building.

Building 49 construction would take place from approximately Spring 2004 to Fall 2005. The Project would require excavation, construction of new infrastructure, and site re-vegetation. The site has no record of soil contamination or other past activities that might be indicative of contamination. Approximately 26,000 cubic yards of soil would be excavated from the site for construction of the proposed building. The site is primarily vegetated with eucalyptus trees and non-native grassland. No Federally or State listed species of concern are known to exist on the site.

Building 49 would be designed to complement the topography of the project site, as well as adjacent buildings and the predominant architectural style of LBNL (see Figures 3, 4, and 5). The Project would also be designed to provide short-range views of the Blackberry Canyon entrance area along Cyclotron Road, and long-range views (from its upper stories) of the University of California, Berkeley campus and adjacent areas, as well as the San Francisco Bay. With the possible exception of the uppermost floor(s), Building 49 would not be viewable from most off-site short, medium, and long-range views. The proposed building's interior would be designed to promote interaction and collaboration between staff.

Building 49 would include a ground lease to the Developer who would own, finance, design, build, and manage the new office building. The University of California would lease the building from the Developer on a year-to-year basis for LBNL use. The University of California

has confirmed that any potential for the building to be leased or occupied by any party other than the University of California or the Department of Energy is not reasonably foreseeable, and is therefore not a part of this California Environmental Quality Act (CEQA) review. In the unforeseeable event that the University or the Department of Energy did not elect to lease the building, a separate CEQA review would be conducted for any alternative occupancy of the building, as appropriate

Soil Disposal or Reuse

The proposed Project would generate between approximately 19,000 and up to 26,000 cubic yards of excavated soil that would need to be transported away from the Building 49 project site. The soil would be loaded into trucks and hauled to an off-site location or locations where it would either be used as fill for landfill covering or as requested by nearby construction projects in need of clean fill at that time. For purposes of the CEQA analysis, it will be assumed that the soil would be shipped west on University Avenue to Interstate 80 to a nearby regional landfill that will be identified in the Environmental Impact Report (EIR) for this Project. It is assumed that each truck would carry approximately 12 cubic yards of fill for a maximum of approximately 2,200 round trips.

Project Need and Objectives

The proposed Building 49 is intended to help address a substantial shortage of office space at LBNL that results in overcrowded work conditions for many staff. It would advance LBNL towards its target—as recommended by the General Services Administration—of 135 net square feet of primary office space per person. LBNL's current sitewide space allocation is approximately 100 net square feet per person. As a third-party development, the Building 49 Project would eliminate the need for scarce governmental funding otherwise necessary to construct such a building on site. It would provide a building that is in close proximity to where it would be most useful (i.e., near the Lab's front entrance and near the densely populated Building 50 and Building 70 complexes), and it would be an opportunity to create a signature building that would serve as a focal point to LBNL from the main gate at Blackberry Canyon. The Project would avoid using additional leased space off site, thereby minimizing inefficiencies of staff being separated from the main Berkeley Laboratory hill site, including the time and expense of frequent travel between off-site leased space and the main site in the everyday conduct of LBNL business.

General Setting and Background

The main LBNL site straddles the border between the cities of Berkeley and Oakland in Alameda County adjacent to and east of the UC Berkeley campus. Berkeley Lab is situated in the ridges and draws of Blackberry and Strawberry Canyons in the East Bay Hills. The area to the west includes the UC Berkeley campus, and UC Berkeley student and general residential neighborhoods; to the north are single-family residential neighborhoods, the Lawrence Hall of

Science, and other rurally set recreational and cultural facilities and parking uses; to the east and southeast are University-owned rural lands including designated a ecological study area and botanical garden; to the south and southwest are the University, recreational facilities, and single-family residential neighborhoods.

A portion of the main LBNL site, including the upper east canyon area, was included in the US Fish and Wildlife Service's designation of critical habitat for the Federally threatened Alameda whipsnake. This designation included major portions of Alameda and Contra Costa counties; LBNL lies on the periphery of this designation area. The designation was made in the year 2000 and was vacated in 2003 by the U.S. District Court for the Eastern District of California. The Building 49 site does not lie within this formerly designated area

Lawrence Berkeley National Laboratory is a multi-program energy research laboratory operated and managed by the University of California under a contract with the U.S. Department of Energy (DOE). LBNL has operated at its present site since 1940. Its principal role for DOE is to conduct research on the broad range of fundamental sciences, energy, and environmental resources. Classified research is not conducted at LBNL.

LBNL is located on approximately 200 acres that are owned by the University of California and most of which are leased to DOE. DOE owns the facilities and structures that comprise LBNL, and it contracts out the management and operation of the National Laboratory to the University of California.

Long Range Development Plan Consistency

LBNL's current Long Range Development Plan (LRDP) and LRDP EIR were approved in 1987. The EIR was later supplemented in 1992 and an Addendum was prepared in 1997 (these documents are referred to hereafter collectively as the "1987 LRDP EIR, as amended"). In the forthcoming Project EIR, the proposed Project will be analyzed for consistency with the current LRDP and 1987 LRDP EIR, as amended.

The proposed Project would be within the space and population levels anticipated in the current 1987 LBNL LRDP and analyzed in the 1987 LRDP EIR, as amended. The proposed Building 49 would not present a land use conflict. Its site is underlain with utilities; it is adjacent to the existing Building 50 complex; and it is buffered from the surrounding off-site view points and land uses by terrain, vegetation, and surrounding buildings. The proposed Project would implement all applicable 1987 LRDP EIR, as amended, mitigation measures.

LBNL is undergoing a multi-year process to prepare a new LRDP and LRDP EIR. If adopted by The Regents of the University of California, these documents would guide future development at LBNL for approximately 20 years. It is expected that draft versions of these documents may be available for public review in early 2004. Although the current LRDP and 1987 LRDP EIR, as

amended, are the applicable guiding documents for this proposed Project, it is anticipated that the proposed Project would be completely consistent with the new LRDP and LRDP EIR.

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The focused, tiered EIR will analyze the potential for project impacts in the following areas: 1) aesthetics; 2) air quality; 3) biological resources; 4) cultural resources; 5) geology, soils, and seismicity; 6) hazards and hazardous materials; 7) hydrology and water quality; 8) land use and planning; 9) noise; 10) public services; 11) transportation and traffic; 12) utilities and service systems; and 13) cumulative impacts. None of the environmental factors identified below are expected to be significant after inclusion of appropriate mitigation. Nevertheless, LBNL will continue preparation of an EIR for this revised project description.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	

IV. DETERMINATION: (To be completed by the Lead Agency)

On the basis of the initial evaluation that follows:

_____ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

_____ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

■ _____ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

_____ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. A TIERED ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

_____ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental document is required. FINDINGS consistent with this determination will be prepared.

Signature _____ Date _____

Printed Name _____ For _____

V. EVALUATION OF ENVIRONMENTAL FACTORS

Revised Initial Study Checklist

	Will be analyzed in EIR	No additional analysis needed
1. AESTHETICS – Would the Project:		
a) Have a substantial adverse effect on a scenic vista?	■	☐
Although the upper portion of Building 49 might be intermittently visible from some off-site locations, it is not expected to be substantially visible from off-site scenic vistas.		
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	■	☐
The site is not readily visible from a State scenic highway.		
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	■	☐
Building 49 construction would remove trees and change the visual character of the immediate site; however, the site is adjacent to heavily developed areas.		
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	■	☐
The Building 49 Project would introduce new sources of light and glare to the immediate site; however, new construction would conform to design guidelines and visual quality mitigation measures identified in the 1987 LRDP EIR, as amended, and it would be adjacent to existing light and glare sources.		
e) Exceed an applicable LRDP or Program EIR standard of significance?	■	☐
With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures if required, the Laboratory expects that no applicable standard of significance would be exceeded.		

Although the upper portion of Building 49 might be intermittently visible from some off-site locations, the Project would not have a substantial adverse effect on a scenic vista or from a scenic road. The Building 49 roofline would be adjacent to and well below the building mass of the Building 50 complex to the east. In conformance with mitigation measures set out in the Laboratory's LRDP EIR, as amended, the building design and the construction materials used would reduce potential impacts of light and glare, and the building site would be landscaped.

	Will be analyzed in EIR	No additional analysis needed
2. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the Project:		
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	■
The LBNL site contains no agriculturally-used lands, nor any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.		
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	■
See above. The project site is not zoned for agricultural use, and no Williamson Act contracts would be affected.		
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	■
See above. The Project would not involve any changes in the environment that could result in the conversion of farmland to nonagricultural use.		
d) Exceed an applicable LRDP or Program EIR standard of significance?	☐	■
No applicable standard of significance would be exceeded.		

There are no agricultural resources at the LBNL site. The proposed Project would not result in the conversion of agricultural resources to non-agricultural use, conflict with existing zoning, or otherwise result in a significant environmental effect to designated agricultural resources. No impact would occur and no further analysis is required. Agricultural resources will be focused out from analysis in the EIR.

	Will be analyzed in EIR	No additional analysis needed
3. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:		
a) Conflict with or obstruct implementation of the applicable air quality plan?	■	☐
The Bay Area Air Quality Management District (BAAQMD) air basin is designated as a State non-attainment area for PM_{10} (particulate matter with a nominal diameter of 10 microns or less), and as a Federal and State non-attainment area for ozone precursors. Construction of both elements of the proposed Project would produce temporary emissions of these pollutants, although in quantities expected to be well below their applicable BAAQMD's CEQA Guidelines thresholds of significance. Such increases would be very minor on a regional level. The Laboratory would use standard emission control and reduction measures, including measures to suppress dust during construction. Operation of Building 49 would not require an emergency generator (as it would rely on the existing permitted generator used by the Building 50 complex), but would likely use gas-powered boilers for water heating. All necessary permits would be obtained through the BAAQMD, as appropriate.		
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	■	☐
See above. Estimated emissions from the Project are expected to be below BAAQMD CEQA Guidelines thresholds for all criteria pollutants. No laboratory research would take place in the building, and thus there would be no laboratory emissions of toxic air contaminants or radionuclides. Although the BAAQMD air basin is designated as a non-attainment area for the State ozone and PM_{10} standards, and a non-attainment area for the Federal ozone standard, any increased contribution to those pollutant emissions resulting from the proposed Project likely would be very minor on a regional level. Local PM_{10} emissions due to construction would be controlled using applicable BAAQMD control measures, and likely would be less than significant based on that agency's criteria. No significant contribution to an air quality standard violation would be expected.		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	■	☐

	Will be analyzed in EIR	No additional analysis needed
The BAAQMD air basin is designated as a non-attainment area for the State ozone and PM_{10} standards, and a non-attainment area for the Federal ozone standard, so any increased contribution of these emissions to the region would constitute an adverse cumulative impact. However, LBNL's expected increases in PM_{10} and ozone precursor emissions as a result of the proposed Project would be relatively minor and would not likely pose a "cumulatively considerable net increase."		
d) Expose sensitive receptors to substantial pollutant concentrations?	■	☐
It is expected that no substantial pollutant concentrations would be created by the Project that would affect any known nearby sensitive receptors.		
e) Create objectionable odors affecting a substantial number of people?	■	☐
Ongoing activities from the proposed Project are not expected to create nuisance or objectionable odors affecting substantial numbers of people, particularly people off-site. Actions that might create objectionable odors include any asphalt-laying during construction activities. Such odors would be temporary and likely noticeable to a small number of off-site people, and then only under limited meteorological conditions.		
f) Exceed an applicable LRDP or Program EIR standard of significance?	■	☐
With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures if required, the Laboratory expects that no applicable air quality standard of significance would be exceeded.		

Temporary construction-related air impacts would occur at the construction site and would result from construction vehicle exhaust and dust from earth movement. Operational impacts from Building 49 would be negligible, as the proposed Project would not generate any new automobile commute trips. Minor emissions from Building 49 gas-powered boilers and other building systems may occur.

4. BIOLOGICAL RESOURCES -- Would the project:		
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	■	☐

	Will be analyzed in EIR	No additional analysis needed
Critical Habitat for the Federally threatened Alameda whipsnake was designated by the US Fish and Wildlife Service in 2000. This designated habitat area included thousands of acres in Alameda and Contra Costa counties, and included an area nearby to the proposed Project site (although this habitat designation was successfully challenged in a recent court case, LBNL will proceed with the analysis as if it were in place).[1] It is not expected that this Project would impact the Federally threatened Alameda whipsnake: the site is not located in the US Fish and Wildlife Service-designated critical habitat area, nor does it contain the characteristic features of classic whipsnake habitat, and there have never been reported sitings of this species anywhere within LBNL boundaries. Nevertheless, for the purposes of the EIR analysis, it will be assumed that the site might be used as a dispersal corridor for the Alameda whipsnake from habitat areas in the region and that the occasional presence of the species on the site is possible.		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	■	☐
The Building 49 site contains no known riparian or sensitive habitat.		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	■	☐
The Building 49 site contains no known federally protected wetlands or waters of the United States as defined under the Clean Water Act.		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	■	☐
The site does not serve as a known migratory corridor or nursery site to any native resident or migratory species. This issue will be further examined in the EIR analysis.		
e) Conflict with any local applicable policies protecting biological resources?	■	☐
Berkeley Lab is not aware of any local applicable policies pertaining to biological resources on the project site.		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan?	■	☐

[1] On May 9, 2003, the U.S. District Court for the Eastern District of California vacated the Fish and Wildlife's Service's Final Rule designating critical habitat for the Alameda Whipsnake. Nevertheless, for the purposes of this analysis, LBNL conservatively recognizes the boundaries of the former critical habitat area in its consideration of possible impacts to biological resources.

	Will be analyzed in EIR	No additional analysis needed

No such plans have been adopted for LBNL site lands.

g) Exceed an applicable LRDP or Program EIR standard of significance? ■ ☐

With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures that may be identified through the EIR analysis, by appropriate resource agencies, or through the permitting process, no applicable standard of significance is expected to be exceeded by the proposed Project.

The proposed Project would include the removal of eucalyptus trees and assorted other trees, including a small number of oaks. The site will be examined for Alameda whipsnake habitat issues, although it is itself neither in designated habitat nor a good example of colonizable habitat.

5. CULTURAL RESOURCES -- Would the Project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? ■ ☐

No known or suspected historical resources exist at the proposed Project location.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? ■ ☐

No known or suspected archaeological resources exist at the proposed Project location.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ■ ☐

No known or suspected paleontological resources or unique geologic features exist at the proposed Project location.

d) Disturb any human remains, including those interred outside of formal cemeteries? ■ ☐

No known or suspected human remains exist at the proposed Project location.

e) Exceed an applicable LRDP or Program EIR standard of significance? ■ ☐

With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures if required, the Laboratory expects that no applicable standard of significance would be exceeded.

	Will be analyzed in EIR	No additional analysis needed
There are no known or expected archaeological or historical sites in the project excavation and construction area. As part of previous investigations, surface examinations for cultural resources were made of undeveloped lands at Berkeley Lab. If an unexpected encounter with a subsurface cultural resource such as an archaeological midden were to occur, LBNL would enact appropriate mitigation as part of the proposed Project.		

6. GEOLOGY AND SOILS -- Would the Project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. The Building 49 Project would be constructed on a sloped site within the Alquist Priolo zone, an area extending 150 meters (about 500 feet) on both sides of major active faults, in this case, the Hayward Fault. To the extent that personnel would relocate to these areas from areas more distant from the fault, it is possible that their exposure to seismic risks would marginally increase. The Project would meet applicable requirements for structures erected in this zone, and the structures would be designed in conformance with the University's seismic safety standards and other applicable Laboratory standards, which exceed California Building Code requirements.	■	☐
ii) Strong seismic ground shaking? See above.	■	☐
iii) Seismic-related ground failure, including liquefaction? See above.	■	☐
iv) Landslides? The proposed Project site is located on a relatively steep slope. To the extent that personnel would relocate to these areas from areas located on more level ground, it is possible that their exposure to landslide-related risks would marginally increase, especially during seismic events. See response to 6(a)(i), above. This would not be expected to be significant.	■	☐
b) Result in substantial soil erosion or the loss of topsoil?	■	☐

	Will be analyzed in EIR	No additional analysis needed
As it would be designed and constructed in accordance with management practices to minimize erosion, the Project would not result in substantial soil erosion. Topsoil within the footprint of the Project would be developed, or covered with engineered fill and paved or reseeded.		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	■	☐
See (a)(i) and (a)(iv), above.		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	■	☐
Building 49 would be constructed on a geotechnically engineered foundation and footing system. The Project would not be located on known expansive soils.		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	■
Like the rest of the LBNL site, Building 49 would rely on the East Bay Municipal Utility District sanitary sewer system for wastewater disposal.		
f) Exceed an applicable LRDP or Program EIR standard of significance?	■	☐
With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures if required, the Laboratory expects that no applicable standard of significance would be exceeded.		

The Building 49 Project would be constructed on a sloped site within the Alquist Priolo zone, an area extending 150 meters (about 500 feet) on both sides of major active faults, in this case, recognized to be nearby to the Hayward Fault. It would be designed to the University's strict standards for earthquake safety, which exceed the building code requirements.

A Fault Rupture Hazard Investigation was prepared for the Building 49 Project in August 2002. Three trenches were dug across the site in order to study subsurface conditions for the purpose of determining if any fault-related features were present. The Investigation concluded that there are no fault-related features found to underlie the project site and that no fault-related features would impact the proposed Project.

7. HAZARDS AND HAZARDOUS MATERIALS – Would the Project:		
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	■

	Will be analyzed in EIR	No additional analysis needed
Building 49 would be used as office and meeting space only; no laboratory research or storage, handling, or use of laboratory chemicals would take place within the building. The building would include no laboratories or fume hoods.		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	■
See above. Also, there is no history of hazardous materials processing, storage, or disposal on the Building 49 project site.		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	■	☐
No acutely hazardous materials, substances, or waste would be handled at the project location. Emissions associated with the Project would be minimal and would involve construction vehicle emissions, and building maintenance system emissions such as those from boilers. (An emergency generator would not be included in this Project as Building 49 would be connected to the existing emergency generator system for the Building 50 Complex.)		
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	■	☐
The project site is not located on any list of hazardous materials sites.		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the project area?	☐	■
The Project is not located within two miles of an airport.		
f) For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the project area?	☐	■
The Project is not located within two miles of a private airstrip.		
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	■	☐
The Project would not impair or interfere with the Laboratory's emergency response and evacuation planning. The new building would be incorporated into LBNL's existing emergency response and evacuation plans.		

	Will be analyzed in EIR	No additional analysis needed
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	■	☐
The project site is on sloped terrain and adjacent to both built-up areas and wildlands. The Laboratory as a whole is subject to dry, warm conditions and occasional high winds during the fire season. Fire hazards would be minimal as the building would meet all required safety standards and fire code, and the building would be surrounded up and downslope by roadways. LBNL has considerable on-site fire suppression capabilities and its own fire department, maintains mutual assistance arrangements with neighboring fire districts, and has implemented a fuel reduction/vegetation management program that has greatly reduced the risk of wildland fire in the vicinity of the Lab.		
i) Exceed an applicable LRDP or Program EIR standard of significance?	■	☐
With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures if required, the Laboratory expects that no applicable standard of significance would be exceeded.		

Building 49 would be used as office and meeting space only; no laboratory research or storage, handling, or use of laboratory chemicals would take place within the building. The building would include no laboratories or fume hoods. Emissions associated with the Project would be minimal and would involve construction vehicle emissions, and building maintenance system emissions such as those from boilers. An emergency generator would not be included in this Project as Building 49 would be connected to the existing emergency generator system for the Building 50 Complex.

Fire hazard would be minimal as the building would meet all required safety standards and fire code, and the building would be surrounded up and downslope by roadways.

8. HYDROLOGY AND WATER QUALITY -- Would the Project:		
a) Violate any water quality standards or waste discharge requirements?	■	☐
The Project would not be expected to violate any water quality standards or waste discharge requirements; it is not expected to affect LBNL's existing wastewater discharge permit, although these issues will be examined in the EIR and with the appropriate resource agencies, as needed.		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	■	☐

	Will be analyzed in EIR	No additional analysis needed
Groundwater is not a major water source in the area. LBNL does not use on-site groundwater, there are no groundwater production wells on-site or nearby that support existing or planned land uses.		
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	■	☐
There are no known drainage conveyances of note on the project site. Because the site is sloped, however, the proposed Project would result in the alteration of existing drainage patterns on the project site; this would not be expected to result in substantial erosion or siltation either on or off the site. Although the Project would decrease the permeable surface on the project site, it would not be expected to significantly alter the amount of flow entering into the downstream storm drain system. Although this is not expected to be significant, this issue will be further examined and a determination made in the EIR and in the coordination with the appropriate permitting agencies, as needed.		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	■	☐
See above. Drainage off-site would be facilitated by an engineered collection and drainage system. While the increase in impervious surface for Building 49 may increase the amount and speed of stormwater through the local storm drain system and ultimately into Strawberry Creek, these changes would be marginal and should not be expected to cause flooding.		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	■	☐
See above. The proposed Project would include appropriate mitigation (e.g., oil/water separaters, etc.) to address potential water quality impacts, as appropriate.		
f) Otherwise substantially degrade water quality?	■	☐
See above. It is not expected that water quality would be substantially degraded by the proposed Project.		
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	■	☐
The Project does not involve any placement of housing and does not include any known flood areas.		

	Will be analyzed in EIR	No additional analysis needed
h) Place within a 100-year flood-hazard area structures which would impede or redirect flood flows?	■	☐
See above. The Project would not place structures within a 100-year flood hazard area.		
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	■	☐
See above. The Project would not expose persons or structures to a significant risk of loss due to flooding. There are no upslope dams or levees in the project vicinity.		
j) Inundation by seiche, tsunami, or mudflow?	■	☐
The Project would not be in an area subject to these hazards.		
k) Exceed an applicable LRDP or Program EIR standard of significance?	■	☐
With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures if required, the Laboratory expects that no applicable standard of significance would be exceeded.		

Building 49 would add an additional approximately 47,000 square feet of new impervious surface area. Although this would have a slight affect on the quantity, speed, and possibly quality of water flowing through the stormwater system that drains into Strawberry Creek, it is not expected to be significant. The EIR will examine this issue more closely.

9. LAND USE AND PLANNING - Would the Project:

a) Physically divide an established community?	■	☐
The proposed Project would not divided an established community.		
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the LRDP, general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	■	☐
The principal applicable land use planning document for Laboratory projects is Berkeley Lab's 1987 Long Range Development Plan. The proposed Project would be consistent with the population and space projections identified in the 1987 LRDP and analyzed in the 1987 LRDP EIR, as amended.		
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	■	☐
The Project is not expected to conflict with any applicable conservation plan.		

	Will be analyzed in EIR	No additional analysis needed
d) Exceed an applicable LRDP or Program EIR standard of significance?	■	☐

With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures if required, the Laboratory expects that no applicable standard of significance would be exceeded.

The proposed Project would be consistent with the population and space projections identified in the 1987 LRDP and analyzed in the 1987 LRDP EIR, as amended. Building 49 would be adjacent to a large-scale complex of similar buildings.

10. MINERAL RESOURCES – Would the Project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	■

No mineral resources have been identified in the vicinity of the proposed Building 49 site.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	■

The proposed Project would not result in the loss of availability of a locally-important mineral resource recovery site.

c) Exceed an applicable LRDP or Program EIR standard of significance?	☐	■

No applicable standard of significance would be exceeded.

No mineral resources have been identified in the vicinity of the proposed Building 49 location, and the proposed Project would not result in the loss of availability of such resources. No impact would occur and no further analysis is required. Mineral resources would not be affected by the proposed Project and would be focused out of the EIR analysis.

11. NOISE – Would the Project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies?	■	☐

Noise meter testing simulating project activities will be conducted to determine whether applicable noise ordinances would be exceeded due to project construction or operational activities at either site.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	■	☐

	Will be analyzed in EIR	No additional analysis needed
Based on the activities that would take place and the distance of the site from offsite receptors, the Project is not expected to create excessive groundborne vibration or noise. No blasting or pile driving would be part of this Project.		
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the Project?	■	☐
The Project would not create a substantial permanent or periodic increase in ambient noise levels. Ambient noise in the area of the Building 49 construction site is high throughout the work day, due to the relatively heavy traffic of automobiles, motorcycles, and trucks over Cyclotron Road and the frequent (every five minutes or so) operation of LBNL's shuttles at its main shuttle stop adjacent to Building 65. Project operational noise would be minimal and generally not noticeable compared to ambient surrounding noises.		
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the Project?	■	☐
See above. Temporary noise would increase due to Project related excavation and construction activities, although these might not be substantial to off-site receptors given the ambient noise in the area. These will be modeled for the EIR using noise meter testing.		
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?	■	☐
The Project is not within an airport use plan or within two miles of a public airport.		
f) For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the project area to excessive noise levels?	■	☐
The Project is not within the vicinity of a private airstrip.		
g) Exceed an applicable LRDP or Program EIR standard of significance?	■	☐
With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures if required, the Laboratory expects that no applicable standard of significance would be exceeded.		

	Will be analyzed in EIR	No additional analysis needed

Ambient noise in the area of the Building 49 construction site is relatively high throughout the work day, due to the relatively heavy traffic of automobiles, motorcycles, and trucks over Cyclotron Road and the frequent (every five minutes or so) presence of LBNL's shuttles at its main shuttle stop adjacent to Building 65. Project operational noise would be minimal and generally not noticeable compared to ambient surrounding noises. It would tend to consist of Building 49 HVAC and building noise.

Project construction would take place in the southwestern portion of LBNL. The Building 49 project site is approximately 650 feet from the nearest UC Berkeley student dormitories and private housing. Intervening terrain, trees, and buildings would likely dampen noise energy before it were to reach many of these receptors.

Noise meter testing simulating project activities will be conducted to determine whether applicable noise ordinances would be exceeded due to Project construction or operational activities at the site.

12. POPULATION AND HOUSING -- Would the Project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	■
The proposed Project would not create new housing. It would decompress space for existing staff positions and would not result in an increase in staff at LBNL, and thus would not create a demand for new housing. The Project's extension of infrastructure would not induce population growth because these would exclusively serve staff and visitors to the Laboratory.		
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	■
The Project would not displace any existing housing.		
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	■
The Project would not displace any residential housing or persons from the area.		
d) Exceed an applicable LRDP or Program EIR standard of significance?	☐	■
No applicable standard of significance would be exceeded.		

The proposed Project would not induce population growth, displace housing, or displace people. No impact would occur and no further analysis is required. Population and housing issues would not be affected by the proposed Project and would be focused out of the EIR analysis.

	Will be analyzed in EIR	No additional analysis needed
13. PUBLIC SERVICES		
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:		
Fire protection?	■	☐
As with any new office building, fire protection services would be required for the proposed Building 49. However, the building would be designed in conformance with Fire Code standards, and would not present any unusual fire hazards. No increase in fire protection staffing would be expected.		
Police protection?	■	☐
As with any new office building, police protection services would be required for Building 49. There are no reasonably foreseeable crime or other public safety issues associated with the Project, and no increase in police protection staffing would be required.		
Schools?	☐	■
No increase in staff would result from the Project, and there would be no impacts upon schools.		
Parks?	☐	■
No increase in staff would result from the Project, and there would be no impacts upon parks.		
Other public facilities?	☐	■
No increase in staff would result from the Project, and there would be no expected impacts upon other public facilities.		
b) Exceed an applicable LRDP or Program EIR standard of significance?	■	☐
With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as Project-specific mitigation measures if required, the Laboratory expects that no applicable standard of significance would be exceeded.		

	Will be analyzed in EIR	No additional analysis needed

The proposed Project would cause a marginal increase in demand for some public services: a new building would present a new location for which police and fire protection would have to be provided. However, the proposed Building 49 would be built to the latest fire, earthquake, and safety codes, and would be located in close proximity to site security services. For the most part, because the proposed Project would not increase the population at LBNL, demand for public services would essentially remain the same, particularly for population-driven demands such as schools, parks, recreational facilities, and other public services.

14. RECREATION --

a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? ☐ ■

The proposed Project would not result in an increase in the number of staff at LBNL, or otherwise create an effect that could increase the use of existing parks and other recreational facilities.

b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? ☐ ■

The Project does not include recreational facilities nor require the construction or expansion of such facilities.

c) Exceed an applicable LRDP or Program EIR standard of significance? ☐ ■

No applicable standard of significance would be exceeded.

	Will be analyzed in EIR	No additional analysis needed
The Project would not affect recreational resources. No impact would occur and no further analysis is required. Recreational resources would not be affected by the proposed Project and would be focused out of the EIR analysis		

15. TRANSPORTATION/TRAFFIC -- Would the Project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? ■ ☐

Because the proposed Project would not increase population at LBNL, no substantial increase in traffic would result, and traffic and traffic patterns should remain generally unchanged by the Project. Because Building 49 would be near the main Blackberry Gate entrance to LBNL, it is possible that the proposed Project could cause a small redistribution of commute traffic from its rear gates (Grizzly Peak and Strawberry gates) to the Blackberry gate entrance. Currently, a little over half of daily automobile trips to LBNL use the Blackberry gate entrance, and the remainder are divided fairly evenly between the Grizzly Peak and Strawberry Gates. This redistribution, if it does occur, would not result in a significant impact upon local roadways.

A temporary increase in construction-related traffic would occur between Spring 2004 and Fall 2005; these increases would not be expected to create a significant impact.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? ■ ☐

See above. Cumulative impacts will be analyzed in the Environmental Impact Report.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? ■ ☐

No effect on air traffic patterns would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ■ ☐

No hazards due to a design feature or incompatible uses would increase.

e) Result in inadequate emergency access? ■ ☐

Emergency access/egress would be adequately handled by existing.

f) Result in inadequate parking capacity? ■ ☐

	Will be analyzed in EIR	No additional analysis needed
The proposed Project would not change the overall parking ratio at LBNL, although it would contribute to a shortage of parking in the Building 50 Complex area.		
g) Conflict with applicable policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	■	☐
No conflict with applicable alternative transportation policies, plans, and programs would occur.		
h) Exceed an applicable LRDP or Program EIR standard of significance?	■	☐
With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures if required, the Laboratory expects that no applicable standard of significance would be exceeded.		

Because the proposed Project would not increase population at LBNL, traffic and traffic patterns should remain generally unchanged by the Project.

A temporary increase in construction-related traffic (non-excavation) would occur between Spring 2004 and Fall 2005; these increases would not be substantial. Under the Project, a substantial number of excavation-related trucks trips through the City of Berkeley would be required to haul soil off-site—up to approximately 2,200 round truck trips through the excavation period.

16. UTILITIES AND SERVICE SYSTEMS – Would the Project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	■	☐
As staff would not increase as a result of the Project, and the activities that would take place in Building 49 would not generate significantly greater quantities of wastewater than is presently generated by the staff and activities that would relocate there from other locations, the project would not have a significant effect on wastewater generation and therefore would not cause Berkeley Lab wastewater to exceed treatment requirements.		
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	■	☐
See above. Due to these factors, the project would not require the construction or new treatment facilities or the expansion of existing ones.		
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	■	☐

	Will be analyzed in EIR	No additional analysis needed
LBNL flows to storm sewers would likely increase marginally due to an overall decrease in permeable area. This increase would not be expected to require the construction of new facilities or the expansion of existing ones.		
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	■	☐
Existing water supplies are expected to meet all reasonably foreseeable project needs.		
e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	■	☐
See above. It is expected that the East Bay Municipal Utility District will have adequate capacity to serve the marginal increase in Project wastewater treatment demand.		
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	■	☐
See above. By not increasing the number of people at Berkeley Lab, the proposed Project would not substantially change the Lab's solid waste generation. The quantity of solid waste that would be generated by the proposed Project is expected to be within the capacities of the landfills currently serving Berkeley Lab.		
g) Comply with applicable federal, state, and local statutes and regulations related to solid waste?	■	☐
The Project will comply with all applicable solid waste requirements.		
h) Exceed an applicable LRDP or Program EIR standard of significance?	■	☐
With the implementation of the mitigation measures set out in the Laboratory's LRDP EIR, as amended, as well as project-specific mitigation measures if required, the Laboratory expects that no applicable standard of significance would be exceeded.		

LBNL flows to storm sewers would likely increase marginally due to an overall decrease in permeable area. In regard to other facility-specific utility demand, electrical and energy use would increase commensurate with lighting, heating/cooling, and otherwise maintaining new office space.

Because the proposed Project would not increase the population at LBNL, demand for most utilities services would not substantially increase. This would be most evident with per capita usage of utilities tied to individual use (e.g., individual computer use, water consumption, wastewater generation, solid waste generation, etc.), which would not change whether the individuals continued to work in existing and overcrowded offices, or in the proposed new building.

	Will be analyzed in EIR	No additional analysis needed
17. MANDATORY FINDINGS OF SIGNIFICANCE --		
a) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	■	☐
The proposed Project would replace relatively undeveloped areas with a building, although this would be adjacent to heavily developed areas. Several eucalyptus and a small number of oak trees would be removed. Although not in former Federally designated critical habitat for the Alameda whipsnake, the EIR will examine whether the project area could possibly be used as a dispersal area for the species.		
b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	■	☐
The proposed Project would result in the loss of pervious surface on the project site. This will be examined along with other projects in the area. It is not expected that any other potentially cumulatively considerable impacts would occur.		
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	■	☐
It is not expected that the proposed Project would cause direct or indirect substantial adverse effects on human beings.		

The proposed Project would reduce vegetation—including screening eucalyptus and a few oak trees—from the project site. It would increase impermeable surface area at the Building 49 site.

18. Fish and Game Determination

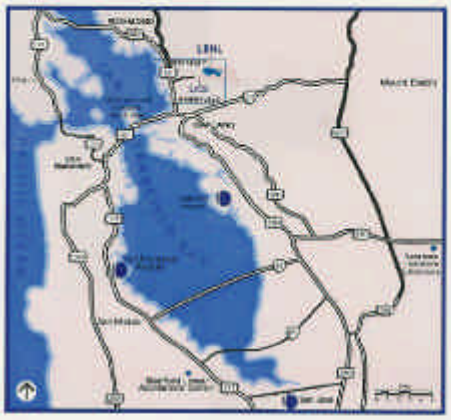
Based on the information above, there is no evidence that the Project has a potential for a change that would adversely affect wildlife resources or the habitat upon which the wildlife depends. The presumption of adverse effect set forth in 14 CCR 753.5 (d) has been rebutted by substantial evidence.

☐ Yes (Certificate of Fee Exemption)

■ No (Pay fee)

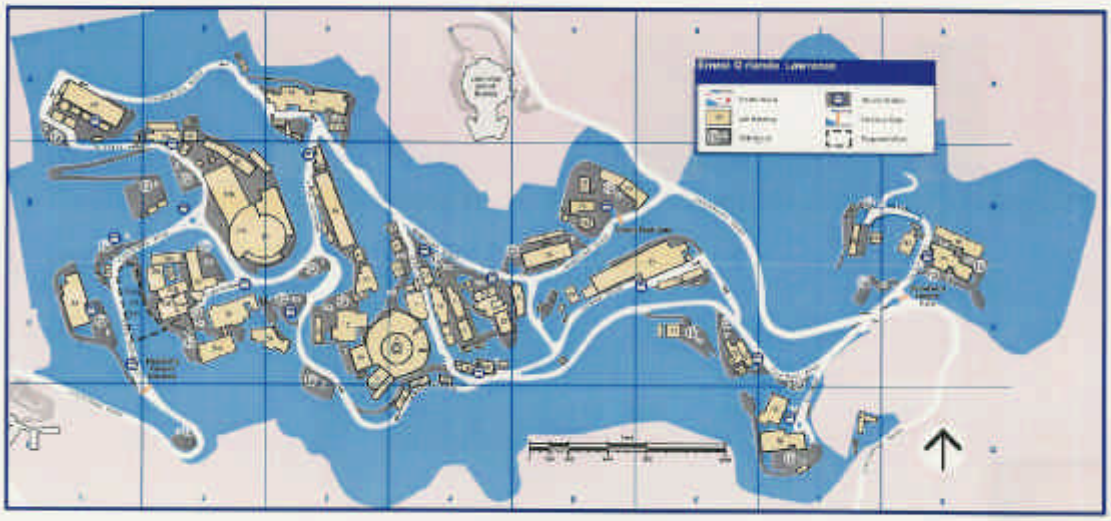
Lawrence Berkeley National Laboratory

Revised Notice of Preparation
Building 49 Project



LBNL Regional Location

LBNL Local Location



Building 49 Site Location

Figure 1: Regional, Local, and Site Location Maps

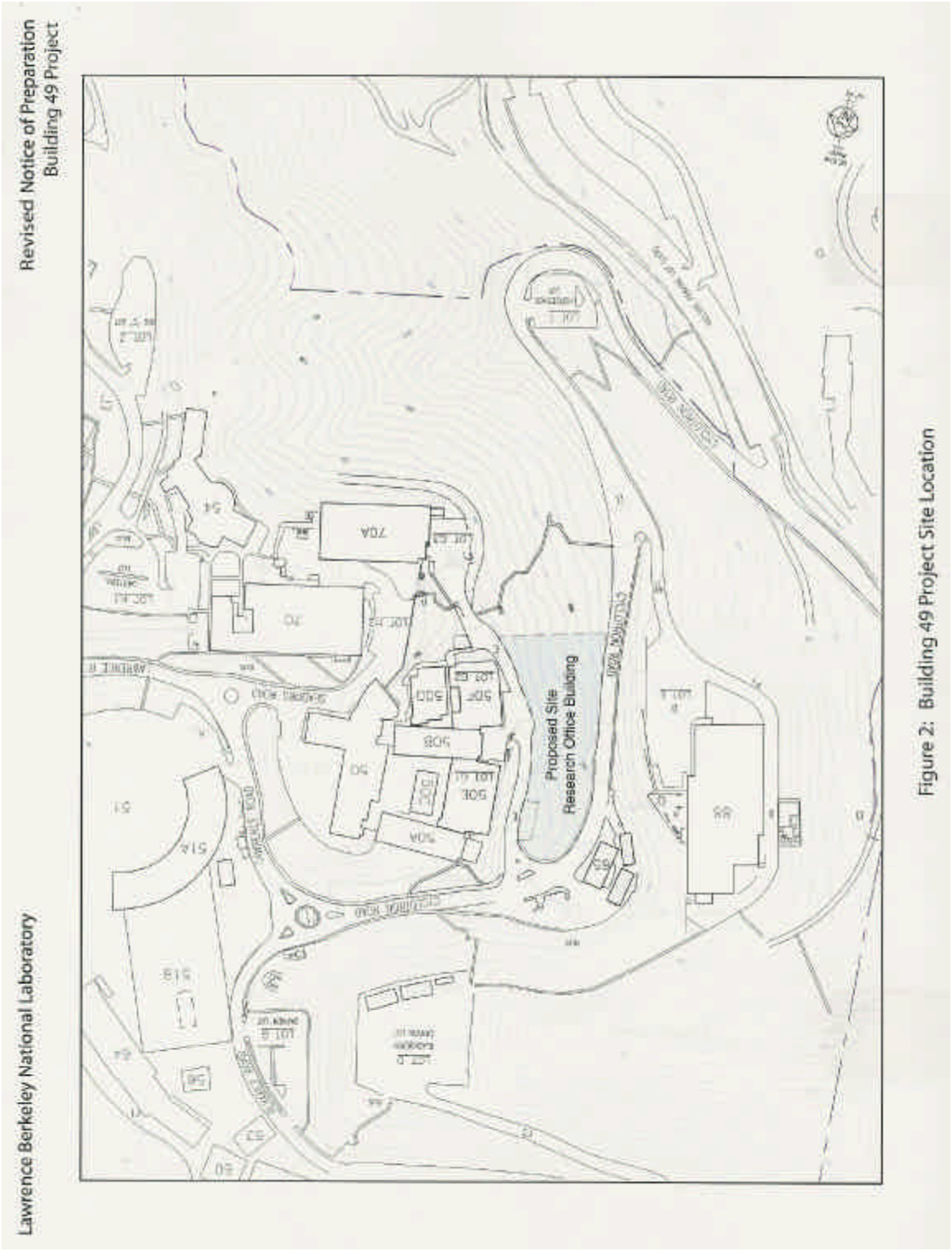


Figure 2: Building 49 Project Site Location

Figure 3: Building 49 Conceptual Building Form - Looking North East

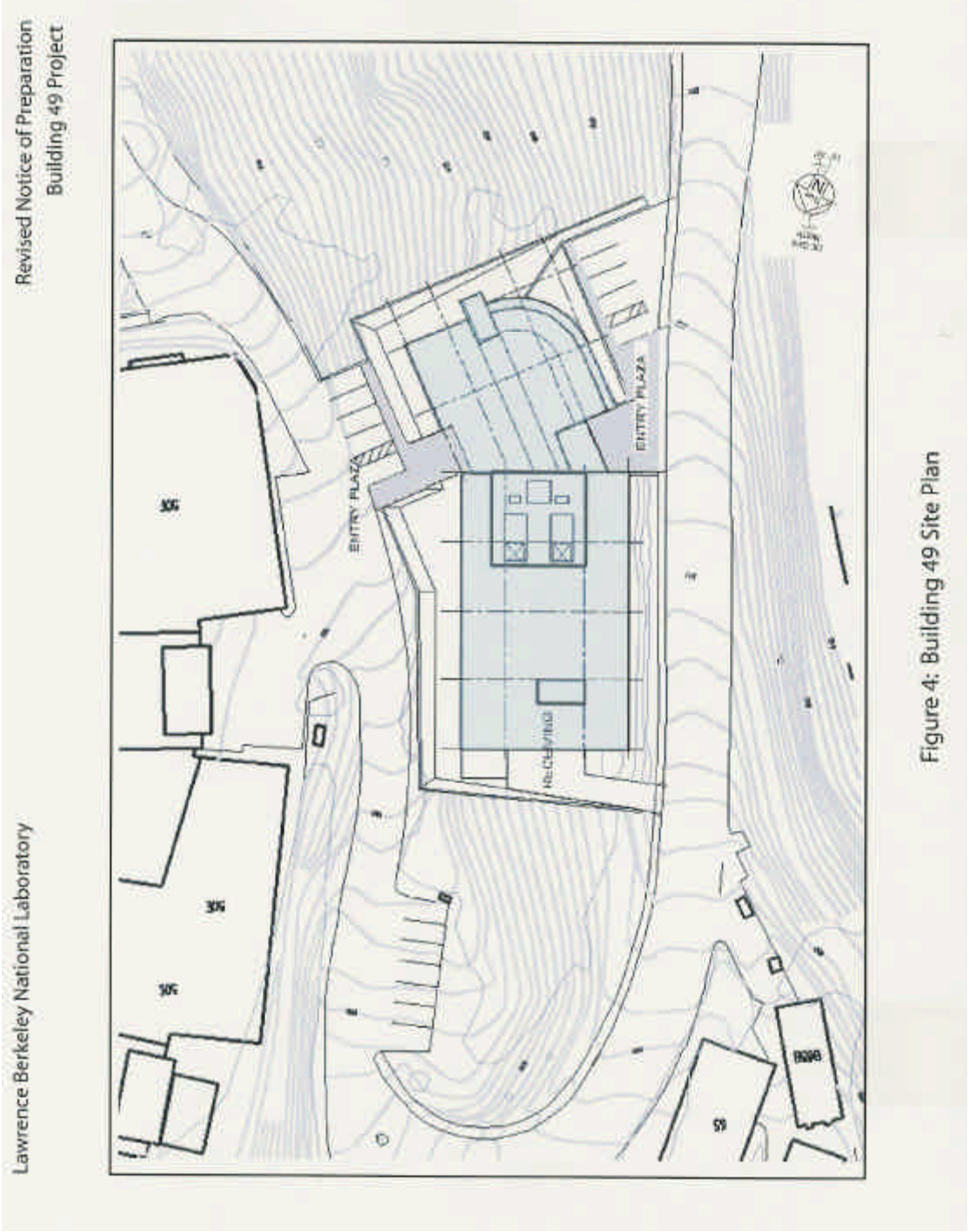
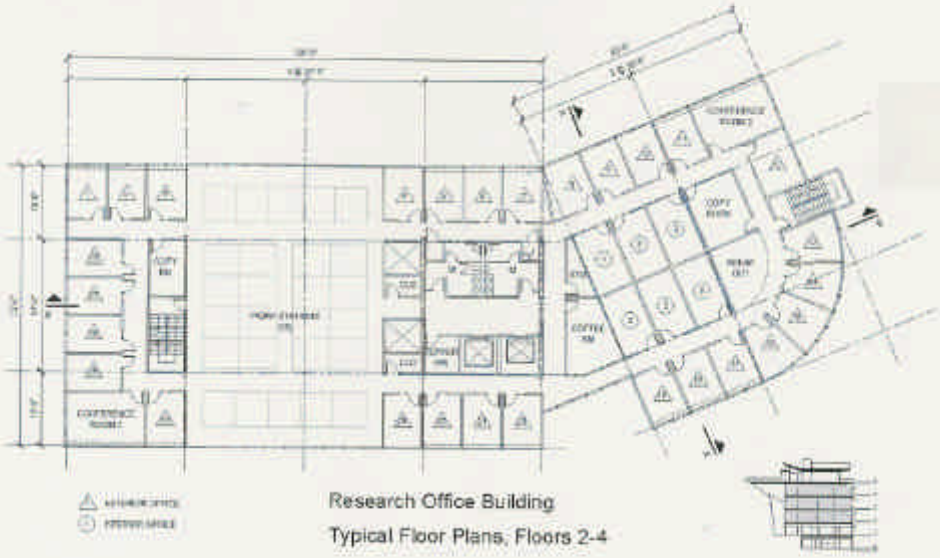


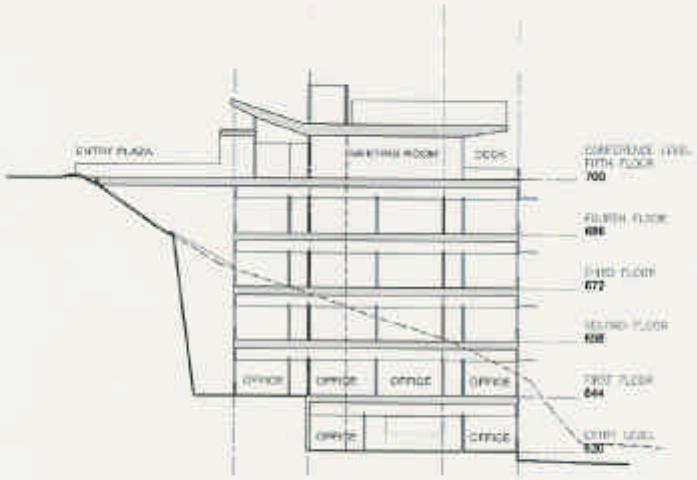
Figure 4: Building 49 Site Plan

Lawrence Berkeley National Laboratory

Revised Notice of Preparation
Building 49 Project



Research Office Building
Typical Floor Plans, Floors 2-4



Research Office Building
Section Looking South

Figure 5: Building 49 Sample Floor Plan and Section

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

Gray Davis
GOVERNOR

Tal Finney
INTERIM DIRECTOR

Notice of Preparation

August 6, 2003

To: Reviewing Agencies

Re: Construction and Operation of Building 49 Office Building
SCH# 2003062097

Attached for your review and comment is the Notice of Preparation (NOP) for the Construction and Operation of Building 49 Office Building draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Jeff Philliber
University of California
Lawrence Berkeley National Laboratory
1 Cyclotron Road
Alameda, CA 94720

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

pp. Philip Crimmins
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-322-2318 FAX 916-324-9936 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH#	2003062097
Project Title	Construction and Operation of Building 49 Office Building
Lead Agency	University of California
Type	**NOP** Notice of Preparation
Description	The University of California proposes to enter into an agreement with a third party developer to construct a six-story, 65,000 sq ft office building (Building 49) at Lawrence Berkeley National Laboratory. LBNL would use the building for office and meeting space, and would "decompress" existing staff from other areas of Berkeley Lab that are currently overcrowded or that do not meet LBNL workspace standards for office workers.

Lead Agency Contact

Name	Jeff Philliber		
Agency	University of California		
Phone	510-486-5257	***Fax***	
email			
Address	Lawrence Berkeley National Laboratory 1 Cyclotron Road		
City	Alameda	***State*** CA	***Zip*** 94720

Project Location

County	Alameda						
City	Berkeley						
Region							
Cross Streets	Cyclotron Road						
Parcel No.							
Township	1S	***Range***	3W	***Section***	6	***Base***	MDB&M

Proximity to:

Highways	24
Airports	
Railways	
Waterways	
Schools	
Land Use	The Ernest O. Lawrence Berkeley National Laboratory (LBNL or Berkeley Lab) is a national research facility in Berkeley and Oakland, California, operated by the University of California for the Department of Energy (DOE). The 1987 LBNL Long Range Development Plan (LRDP) is the governing land use document for Berkeley Lab. The Building 49 site is currently in an area described as "open space" within the designated "Central Research and Administration Area" functional planning area. The G-4 parking lot site is partially within the designated "Central Research and Administration Area" functional planning area and is partially within the "West Strawberry Canyon" buffer area. The southern portion of the site is within an area not designated in the 19687 LBNL LRDP. Berkeley Lab is not subject to local and municipal land use designations and zoning. Nevertheless, Berkeley Lab, including both the Building 49 and G-4 parking lot sites, is designated as "Institutional" space in the City of Berkeley General Plan.

Project Issues	Aesthetic/Visual; Air Quality; Archaeologic-Historic; Forest Land/Fire Hazard; Flood Plain/Flooding; Drainage/Absorption; Geologic/Seismic; Noise; Public Services; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects
Reviewing Agencies	Resources Agency; Department of Parks and Recreation; San Francisco Bay Conservation and Development Commission; Department of Fish and Game, Region 3; Native American Heritage Commission; Caltrans, District 4; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 2

Note: Blanks in data fields result from insufficient information provided by lead agency.

Document Details Report
State Clearinghouse Data Base

Date Received 08/06/2003 ***Start of Review*** 08/06/2003 ***End of Review*** 09/04/2003

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: Alameda **SCH#** 2003062097

Resources Agency

- [■] **Resources Agency** Nadell Gayou
- [ ] **Dept. of Boating & Waterways** Suzi Betzler
- [ ] **California Coastal Commission** Elizabeth A. Fuchs
- [ ] **Colorado River Board** Gerald R. Zimmerman
- [ ] **Dept. of Conservation** Roseanne Taylor
- [ ] **California Energy Commission** Environmental Office
- [ ] **Dept. of Forestry & Fire Protection** Allen Robertson
- [ ] **Office of Historic Preservation** Hans Kreutzberg
- [■] **Dept of Parks & Recreation** B. Nash Tilghman Environmental Stewardship Section
- [ ] **Reclamation Board** Lori Buford
- [ ] **Santa Monica Mountains Conservancy** Paul Edelman
- [X] **S.F. Bay Conservation & Dev't. Comm.** Steve McAdam
- [ ] **Dept. of Water Resources** Resources Agency Nadell Gayou

Fish and Game

- [ ] **Dept. of Fish & Game** Scott Flint Environmental Services Division
- [ ] **Dept. of Fish & Game 1** Donald Koch Region 1
- [ ] **Dept. of Fish & Game 2** Banky Curtis Region 2
- [X] **Dept. of Fish & Game 3** Robert Floerke Region 3
- [ ] **Dept. of Fish & Game 4** William Laudermilk Region 4
- [ ] **Dept. of Fish & Game 5** Don Chadwick Region 5, Habitat Conservation Program
- [ ] **Dept. of Fish & Game 6** Gabrina Gatchel Region 6, Habitat Conservation Program
- [ ] **Dept. of Fish & Game 6 I/M** Tammy Allen Region 6, Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M** Tom Napoli Marine Region

Other Departments

- [ ] **Food & Agriculture** Steve Shaffer Dept. of Food and Agriculture
- [ ] **Dept. of General Services** Robert Sleppy Environmental Services Section
- [ ] **Dept. of Health Services** Wayne Hubbard Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission** Debby Eddy
- [ ] **Office of Emergency Services** John Rowden, Manager
- [ ] **Governor's Office of Planning & Research** State Clearinghouse

---

- [■] **Native American Heritage Comm.** Debbie Treadway
- [ ] **Public Utilities Commission** Ken Lewis
- [ ] **State Lands Commission** Jean Sarino
- [ ] **Tahoe Regional Planning Agency (TRPA)** Lyn Barnett

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics** Sandy Hesnard
- [ ] **Caltrans - Planning** Ron Helgeson
- [ ] **California Highway Patrol** Lt. Julie Page Office of Special Projects
- [ ] **Housing & Community Development** Cathy Creswell Housing Policy Division

Dept. of Transportation

- [ ] **Dept. of Transportation 1** Mike Eagan District 1
- [ ] **Dept. of Transportation 2** Don Anderson District 2
- [ ] **Dept. of Transportation 3** Jeff Pulverman District 3
- [■] **Dept. of Transportation 4** Tim Sable District 4
- [ ] **Dept. of Transportation 5** David Murray District 5
- [ ] **Dept. of Transportation 6** Marc Birnbaum District 6
- [ ] **Dept. of Transportation 7** Stephen J. Buswell District 7
- [ ] **Dept. of Transportation 8** Linda Grimes, District 8
- [ ] **Dept. of Transportation 9** Gayle Rosander District 9
- [ ] **Dept. of Transportation 10** Tom Dumas District 10
- [ ] **Dept. of Transportation 11** Bill Figge District 11
- [ ] **Dept. of Transportation 12** Bob Joseph District 12

Cal EPA

Air Resources Board

- [ ] Airport Projects Jim Lerner
- [ ] Transportation Projects Kurt Karperos
- [ ] Industrial Projects Mike Tollstrup

- [ ] **California Integrated Waste Management Board** Sue O'Leary
- [ ] **State Water Resources Control Board** Jim Hockenberry Division of Financial Assistance
- [ ] **State Water Resources Control Board** Student Intern, 401 Water Quality Certification Unit Division of Water Quality
- [ ] **State Water Resouces Control Board** Mike Falkenstein Division of Water Rights
- [X] **Dept. of Toxic Substances Control** CEQA Tracking Center

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1** Cathleen Hudson North Coast Region (1)
- [X] **RWQCB 2** Environmental Document Coordinator San Francisco Bay Region (2)
- [ ] **RWQCB 3** Central Coast Region (3)
- [ ] **RWQCB 4** Jonathan Bishop Los Angeles Region (4)
- [ ] **RWQCB 5S** Central Valley Region (5)
  - [ ] **RWQCB 5F** Central Valley Region (5) Fresno Branch Office
  - [ ] **RWQCB 5R** Central Valley Region (5) Redding Branch Office
- [ ] **RWQCB 6** Lahontan Region (6)
  - [ ] **RWQCB 6V** Lahontan Region (6) Victorville Branch Office
- [ ] **RWQCB 7** Colorado River Basin Region (7)
- [ ] **RWQCB 8** Santa Ana Region (8)
- [ ] **RWQCB 9** San Diego Region (9)

- [ ] **Other** _____

September 4, 2003

Mr. Jeff Philliber
Environmental Planning Coordinator
Lawrence Berkeley National Lab
One Cyclotron Rd. M/S 90K
Berkeley, CA 94720

Dear Mr. Philliber:

Please submit the following comments for review for the Revised NOP of Construction of Building 49 Draft Focused Tiered EIR

1. The intent of the lawmakers who created the National Environmental Protection Act can be viewed as a call for the Lawrence Berkeley Lab to lead in becoming a good neighbor with those of us living and working in Berkeley and Oakland. This project is an opportunity for your organization to lead in going much further in a thorough process of environmental review for the tearing out of the steep hillside to build an office tower, Building 49.

2. Instead of the 'old way' of tiering off old data sets, now is the time to do a full and deep environmental review. Public imput can assist an expanded knowledge base and identify human health and environmental health concerns that those of us in the community are quite aware of and troubled over.

3. We all feel deeply that current world events deserve new assessments for our domestic safety and security. Substantial risks of 2003 man-created catastrophic events require a weighted hi probability. As they do not appear in the CEQA guidelines, it would be prudent and helpful to the larger community if your planners thought through the perils of bioterrorism, chemical terrorism, and bombs.

4. People in the community know the Lab site is vulnerable for natural disasters: earthquake; firestorm; earthquake-induced landslides; rainage landslides; explosions and fires.

5. Any laboratory workplace of a few thousand employees bears the potential risk of security problems: possibility of accidents or deliberate actions. The LBL has a documented history of releases of deadly agents, (radionucleides, volatile organic compounds, and biological agents). These reports continue in the community memory to be viewed as significant threats to our health and safety.

6. Workplace violence of disgruntled employees, worker sabotage, and lax management appear to be on the rise in national statistics; the LBL is no exception to these facts.

7. The construction of Building 49 and hauling away soil will increase the number of persons who will have access to the LBL grounds. Recent world events have presented images of suicide terrorists who drive an ordinary truck or van to a site as part of the day to day construction.

8. The LBL has no buffer perimeter security. Criminal justice colleagues tell me (for example) it would not be difficult for a 'survivalist' domestic terrorist trained in military tactics to set off dangerous explosions from an uphill site that could also release radioactive and other mixed waste dangerous compounds into the atmosphere that currently are stored or capped off under ground.

9. It is universally known that there is significant contamination of buildings, soil, ground water and vegetation at the LBL site. Still, issues of offsite groundwater have not been addressed. Plans to clean up the mixed radioactive and chemical waste have dragged and are being re-characterized on paper and presented as "less dangerous" or not dangerous at all.

10. The well-known tritium plumes are still in the soil and groundwater threatening Strawberry Creek and the San Francisco Bay. Recent seismic activity on the Hayward Fault may have enlarged these plumes and may have hastened their drainage into Strawberry Creek. Denying these potential hazards by changing the base line of dangerousness does not change their perilousness in our perception.

11. It would be a good neighbor gesture to ask the community for help in finding the funding to do a full clean up of LBL contamination on the areas for future building sites.

12. It would be less expensive and prudent to move the site for Building 49 to a flat area where a former building was.

13. The funding arrangements for Building 49 are a new approach for Lab construction. Why not view this as a new course for development at other labs that can serve as a model our future health and safety?

14. Finally, we have "Disaster Resistant" public education training in Berkeley. It doesn't go far enough to prepare us to address a first response and community involvement for the above mentioned items.

15. A Hazard Control Plan built into your planning process could contribute to our domestic safety and a "good neighbor" practice.

Thank you for your attention.

Very truly yours,
Jennifer M Pearson

Jennifer Mary Pearson with: Preserve Strawberry Creek Watershed Alliance; Neighbors of the Schoolhouse/Lincoln Creek Watershed and Member of Friends of Strawberry Creek

Subject: Bldg 49 comments
Date: Fri, 05 Sep 2003 17:10:00 -0700
From: "Jennifer Pearson" <jennifermaryphd@hotmail.com>
To: jgphilliber@lbl.gov

September 4, 2003

Mr. Jeff Philliber
Environmental Planning Coordinator
Lawrence Berkeley National Lab
One Cyclotron Rd. M/S 90K
Berkeley, CA 94720

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Thank you for your attention.

Very truly yours,

Jennifer Mary Pearson with: Preserve Strawberry Creek Watershed Alliance; Neighbors of the Schoolhouse/Lincoln Creek Watershed and Member of Friends of Strawberry Creek

COMMITTEE TO MINIMIZE TOXIC WASTE

Jeff Philliber
Environmental Planning Coordinator
Lawrence Berkeley National Laboratory, MS 90K
One Cyclotron Road
Berkeley, California 94720

September 3, 2003

Re: Comments on the Revised Notice of Preparation, Draft Focused, Tiered Environmental Impact Report regarding the Construction and Operation of Building 49

Dear Mr. Philliber,

We are writing these comments to express our grave concern and opposition to the proposed construction of Building 49, a six-story, 65,000-square-foot office building in the Alquist-Priolo Earthquake Fault Zone as well as in the Seismic Hazard Zone, as identified by the California Geological Survey's recently adopted maps (February 2003) (See attachments 1 and 2).

The Lawrence Berkeley National Laboratory (LBNL) is located in the hills of the **Strawberry Creek Watershed**, which includes the Blackberry Canyon and Strawberry Canyon Watersheds, which are further divided into the Stadium Hill and Chicken Creek Sub-Watersheds (See attachment 3).

The proposed Building 49 is located in the Blackberry Canyon Watershed, which was named after Blackberry Creek (aka North Fork of Strawberry Creek), which flows through the Canyon from east to west (See attachment 4) .

The Notice of Preparation (NOP) documents, both text and maps, are extremely deficient regarding site/project description. Most of the creek and watershed specific information above were excluded, thus making it difficult, if not impossible for the general public to properly understand the dynamics of the site. Furthermore, there were no maps showing the Alquist-Priolo Earthquake Fault Zone, nor the traces of the active Hayward Earthquake Fault just a few meters from the proposed building site.

Based on the Seismic Hazard Zone maps the proposed project site lies within the area of very high risk earthquake-induced landslides (See attachment 5). It would seem extremely irresponsible and dangerous to propose any development on this unstable, unpredictable, still pristine natural area, which includes the riparian habitat, the Cafeteria Creek.

In light of the above facts we are calling for an **Ecological Protection Zone** in the Strawberry Creek Watershed, specifically this protection zone would include, but is not limited to all of the areas identified by the State as prone for earthquake-induced landslides

(See attachment 5). The entire area for the proposed Building 49 would be included in the Ecological Protection Zone which calls for a permanent moratorium on construction and development.

The Lawrence Berkeley National Laboratory has several acres of contaminated land, now occupied by huge decommissioned facilities for which clean-up potential should be evaluated under the Environmental Impact Report (EIR) and the Environmental Impact Statement (EIS) processes. These sites include the Bevatron Accelerator (Building 51), the HILAC and Super HILAC (Building 71), the newly defunded 88 inch Accelerator (Building 88), some of which have already been standing idle for over a decade, as well as the contaminated Building 75 (the former National Tritium Labeling Facility) area.

We are requesting a commitment from Department of Energy and LBNL for a time-line to submit for EIR/EIS review the comprehensive clean-up of these contaminated sites to determine their potential re-use, prior to undertaking any new development on any of the remaining pristine, unused, i.e. new open space lands at LBNL in the Strawberry Creek Watershed. The Lab must prepare an EIR under CEQA and an EIS under NEPA for the dismantling of these facilities, the removal of the resulting radioactive/hazardous debris and consideration of various alternatives for the final disposition of those materials and the contaminated soil/vegetation, such as hardened on-site storage (HOSS) (See attachment 6).

The NOP lacked any consideration for alternate sites. In addition to the contaminated sites referred to above, LBNL has several buildable areas especially next to Building 90, now occupied by office trailers, which could be easily removed and the site used for the proposed office building.

Since there are several feasible alternatives to building in a high risk earthquake induced landslide area, destroying riparian habitat and hauling over 2000 truck loads of soil through Berkeley streets, we strongly urge LBNL to give priority to evaluating the flat area next to Building 90 for siting the proposed Building 49.

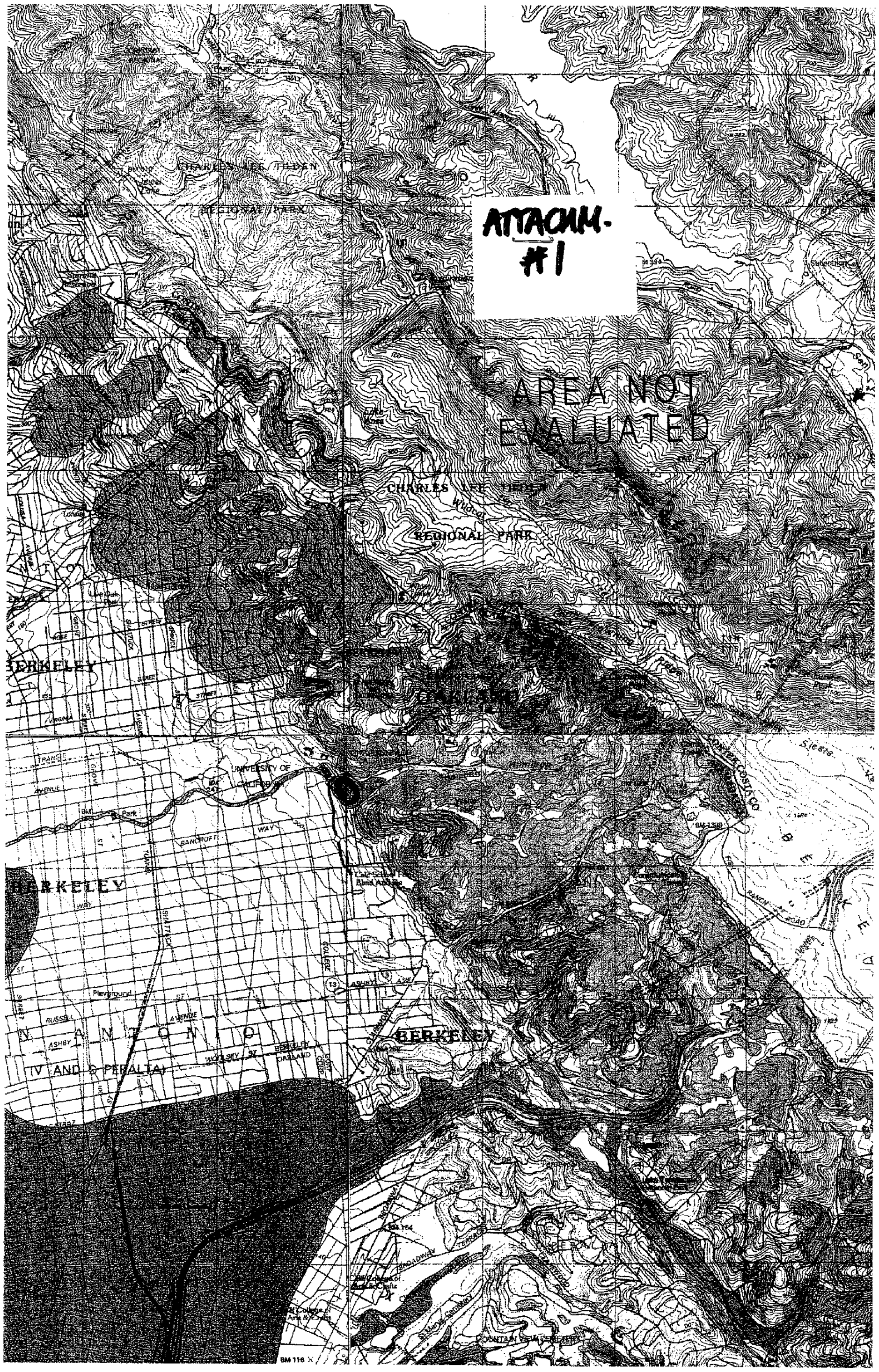
Furthermore, we believe that the Building 49 EIR process is evading LBNL's Long Range Development Plan (LRDP) EIR process and should be postponed and made an integral part of the LBNL LRDP, which also should encompass a comprehensive **Strawberry Creek Watershed Management Plan** (See Robert Charbonneau: "Strawberry Creek Management Plan" attachment 7) for the over 200 acre area that is currently occupied by LBNL (Department of Energy) in the Strawberry Creek Watershed.

Sincerely,

Irmi Meindl
1323 Hopkins Street
Berkeley, CA 94702

Gene Bernardi
9 Arden Road
Berkeley, CA 94704

Pamela Sihvola
P.O. Box 9646
Berkeley, CA 94709


ATTACHM.
#1
AREA NOT
EVALUATED
CHARLES LEE TILDEN
REGIONAL PARK
BERKELEY
BERKELEY
BERKELEY

ATTACHM. #2

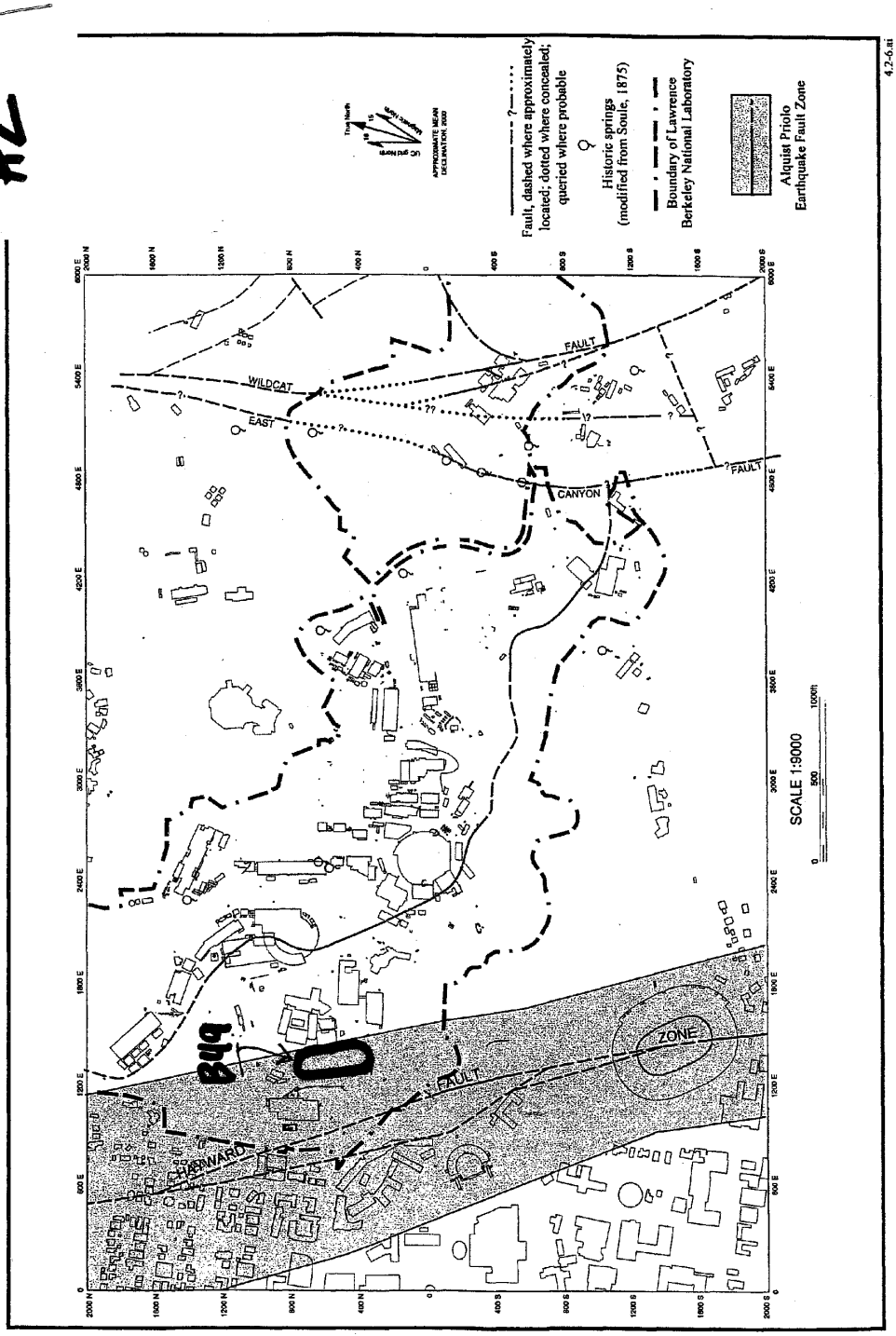
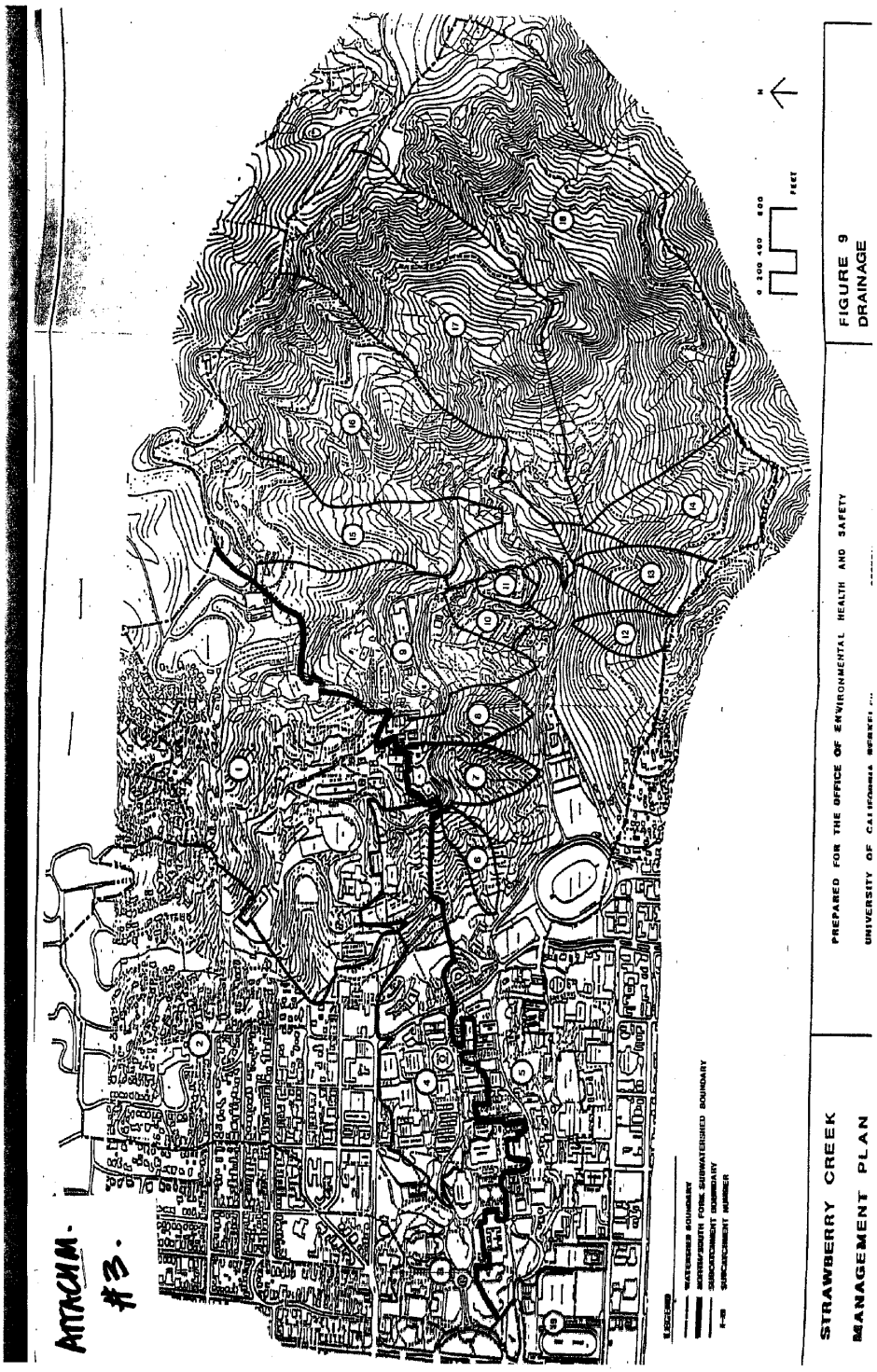
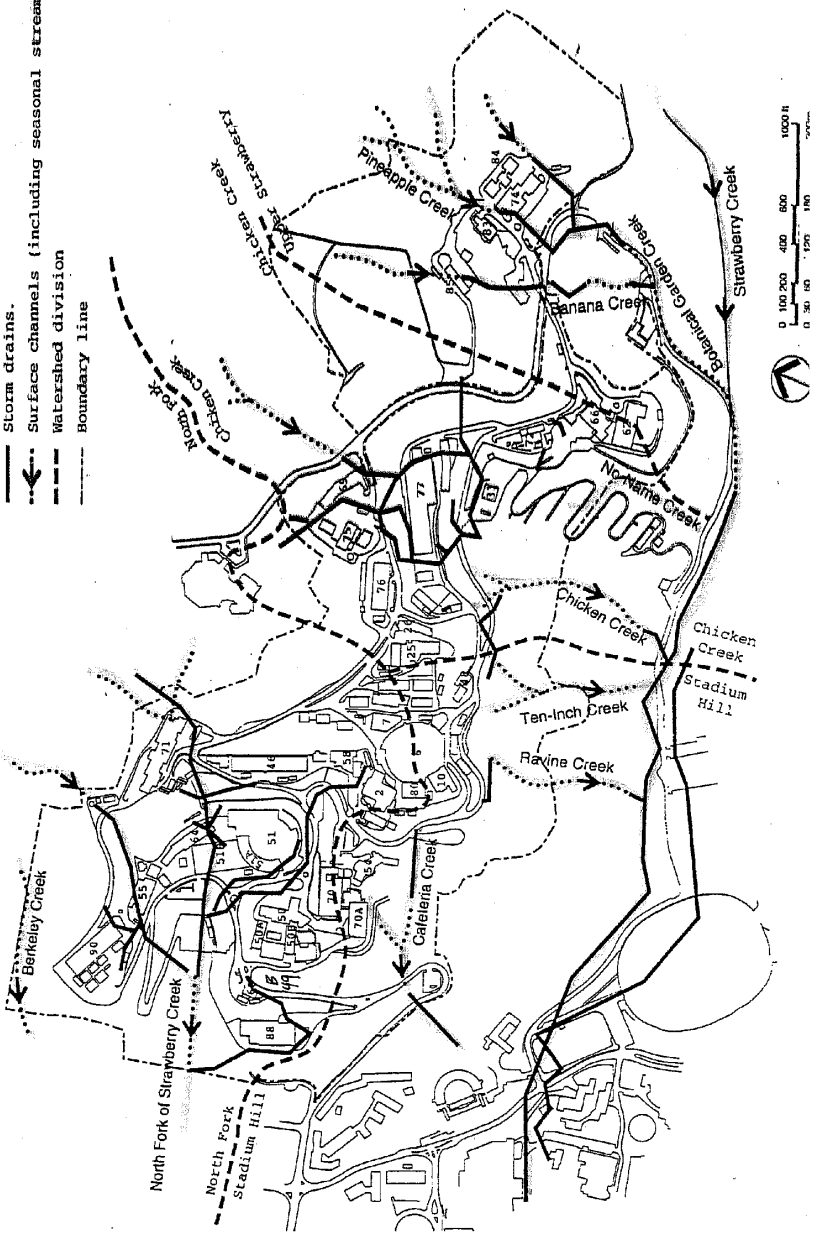
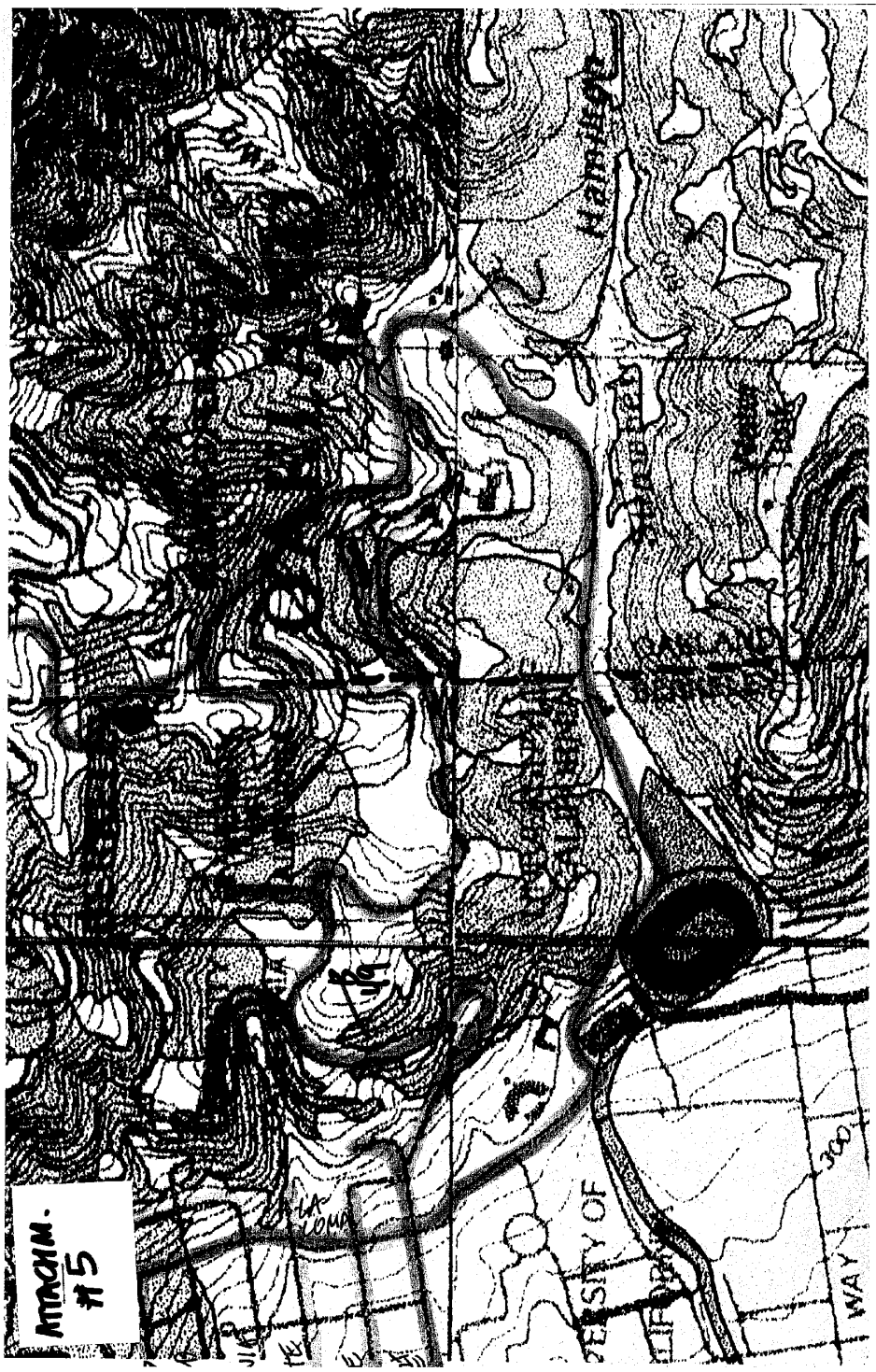


Figure 4.2-6. Fault Map of LBNL Showing Location of Alquist Priolo Earthquake Fault Zone.


ATTACH. #3.
LEGEND
WATERSHED BOUNDARY
SUBWATERSHED BOUNDARY
SUBCATCHMENT BOUNDARY
SUBCATCHMENT NUMBER
0 100 400 800 FEET
N
STRAWBERRY CREEK
MANAGEMENT PLAN
PREPARED FOR THE OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY
UNIVERSITY OF CALIFORNIA BERKELEY
FIGURE 9
DRAINAGE

ATTACHM. #4


Storm drains.
Surface channels (including seasonal streams)
Watershed division
Boundary line
Pineapple Creek
Chicken Creek
Upper Strawberry Creek
North Fork Strawberry Creek
Botanical Garden Creek
Strawberry Creek
Banana Creek
No-Name Creek
Chicken Creek
Chicken Creek
Stadium Hill
Ten-Inch Creek
Ravine Creek
Cafeteria Creek
Berkeley Creek
North Fork of Strawberry Creek
North Fork Stadium Hill
0 100 200 400 600 1000 ft
0 50 100 150 180


ATTACHM.
#5
UNIVERSITY OF
WAY

ATTACHM. #6

SPRING 2003 www.nukebusters.org

The CAN-Did Press

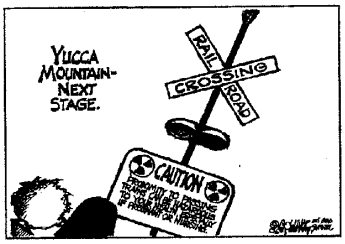
THE NEWSLETTER OF THE CITIZENS AWARENESS NETWORK
Serving Reactor Communities Throughout The Northeast

CAN CENTRAL:
TERRORISM AND NUCLEAR POWER POST 9/11

There is increased outcry in the Northeast for closing nuclear reactors. Reactor sites are vulnerable to a terrorist attack and contain more than 1,000 times the radiation released in one Hiroshima sized atom bomb. Operating reactors and decommissioning reactor sites are targets since millions of curies of high level waste are contained in vulnerable fuel pools even after reactors shut down. Dry cask storage of high level waste is also vulnerable. No existing form of waste storage could withstand a September 11th-type attack. Blueprints and diagrams of U.S. nuclear reactors were found in caves in Afghanistan.

CAN commissioned a report by Dr. Gordon Thompson on Robust Storage of High Level Waste that we released this spring. The report analyzes the vulnerability of reactor sites and provides interim solutions. We've organized forums in VT, MA, CT and NY on nuclear vulnerability and the need to harden reactor sites to protect communities from the monstrous waste problem generated by the nuclear industry.

We organized a meeting (Protecting Our Communities Against Nuclear Terrorism) at Public Citizen in Washington, DC – bringing together people from reactor and waste-site communities, national policy groups, security groups, and scientists to address nuclear insecurity and the development of Hardened On-Site Storage at nuclear reactor sites (HOSS). A strategy for HOSS is needed, whether or not a repository is opened at Yucca Mountain, and should be implemented as a major element of any defense-in-depth strategy for civilian nuclear facilities. A defense-in-depth strategy should be a component of homeland-security providing solid protection for reactor communities.



Implementing H.O.S.S. will not only decrease reactor community vulnerability, but will also relieve the pressure on reactor communities to ship their waste to Native American lands in the west. It will provide time to investigate a scientifically sound and environmentally just, permanent storage solution to the high level waste crisis. While in DC, we met with Northeast legislators who were supportive of our concerns and willing to introduce legislation to address nuclear insecurity. We asked them to support an independent analysis of fuel pool vulnerability and hardened onsite storage of waste.

In March, CAN conducted a Mock High Level Waste Tour in the Northeast focusing on environmental racism and the vulnerability of reactor sites to attack. Katherine Blossom from the Shoshone Nation in Nevada toured with CAN, NIRS, and Public Citizen to bring these critical issues to the public's attention. The nuclear industry, with Bush administration's support, is lobbying intensively to site waste dumps on Native Land. The industry is exploiting people's fears of terrorism to support transport and siting. Communities chosen for nuclear contamination are pressured to act opportunistically – enabling the industry to pit sacrifice community against sacrifice community rather than their cooperating to stop nuclear power.

MA CAN: Yankee Clean Up

Yankee Atomic has been loading its high level waste into casks that will sit out on-site on a concrete pad for decades. The last waste will be transferred by mid June. CAN toured the storage site last summer. Casks stood behind a chain link fence open to the elements and vulnerable to would-be intruders. There is increased security and surveillance, but the fuel remains a target for an act of malice.

With fuel removal completed, Yankee will assess cleanup of the fuel pool and the large plume of radioactive contamination (tritium) that migrated from the ion exchange pit which was attached to the pool in the 1960's. Rather than clean up the leak, which measured 2.4 million picocuries per liter of Tritium in Sherman Pond (EPA drinking water standards allows 20 thousand picocuries per liter of tritium) at the time, Yankee chose dilution as the solution to pollution.

MA CAN.....

Now the mess has potentially migrated into the ground water and the Deerfield River. Test wells will be dug to determine the size and depth of the plume. Yankee will submit its new License Termination Plan in the fall of 2003 for public comment. It will have to meet the MA state clean-up requirement of 10 millirem per year rather than the NRC limit of 25 millirem per year.

This summer, we will kick off a campaign – Protecting our Communities – to pass town and county resolutions in support of hardening reactor sites. CAN held a Forum in November in Amherst on Security and Terrorism with Gordon Thompson and began educating people about nukes and terrorism. We intend to meet with local officials and legislators to present Dr. Thompson's report and a resolution to support Hardened On Site Storage at reactor sites. Anyone interested in providing a packet to their local select board or town council, please contact us. There are people in both MA and VT engaging their local government in this resolution process. We will also table and flier this summer on nuclear insecurity. Anyone interested in hosting a house party on nuclear insecurity, contact CAN at 339-5781 or can @ nukebusters.org.

CT CAN

CT CAN is involved with two campaigns. One is the ONGOING law suit weive undertaken to force CY to clean up its reactor site; the other is directed at reactor community vulnerability post 9/11 and our work to reduce risk and increase security at reactor sites. (See CAN Central Update)

Our lawsuit has forced increased accountability and clean up of the site. As one of the judges said during the five days of hearing in Feb. 03, he has never been involved with a pro-se legal team (no lawyer) where the intervenerís (CAN) are doing such a through job and accomplished so much. We presented solid evidence to discredit CY in a number of important areas! We are still writing briefs and the judges decision is months away.

What we have accomplished so far is:

- Forced CY to increase the testing for radioactive contamination on site.
- Forced the NRC to enforce its decommissioning regulations and require CY to rewrite their License Termination Plan.

CY agreed to clean up standards that would allow a family farm to operate on the site once CY is gone. However CY's definition of what constitutes a family and the exposure to radiation they would receive is unrealistic and does not account for the vulnerability of children. A recent Environmental Protection Agency (EPA) draft guidance regulation found that children ages of 5 to 15 years are 3 times as vulnerable to radiation as previously believed. The 5-15 year olds updated vulnerability criteria is quite shocking and its even worse for newborns from birth to 2 years of age. The EPA has found their vulnerability to be 10 times greater! With this new draft as a basis for argument we have petitioned the NRC commissioners to keep our lawsuit active until the EPA and the NRC revise their regulations in light of the new scientific findings.

www.nukebusters.org

Central New York

CNY-CAN is fighting for better security at Nine Mile, FitzPatrick and Ginna and gearing up for the future. This summer, we will kick off a campaign to pass town and county resolutions in support of HOSS, with regular tabling and fliering and meeting local officials. We began educating people about HOSS in November, with a public forum on Security and Terrorism with Gordon Thompson, Dave Lochbaum (Union of Concerned Scientists), and Paul Gunter (NIRS). We are also working to build a coalition to fight waste transportation and environmental racism.

In response to reports from local residents radiation monitors, we are forming a radiation monitoring network in CNY. By the end of summer, we plan to have six monitors reporting readings to the CAN website daily. The network will enable us to watchdog Entergy and Constellation and build public awareness of releases from the reactors.

This work is laying the foundation to oppose relicensing and the construction of new reactors in CNY. Last fall, Rochester G&E applied to relicense Ginna. Constellation is expected to do the same for Nine Mile in Fall 2003. On the horizon, Entergy may be making plans for a new nuke in Oswego. A consortium of companies is building a new power line to downstate NY. It would carry enough electricity to replace Indian Point, and open up a market for building new power plants upstate.

Vermont

Vermont Yankee has applied to the Vermont Public Service Board for a 20% uprate, increasing VY's power output by 20%. This is a cause for concern in that VY would be the oldest reactor in the country to get such a high uprate if it is approved. The Windham Regional Commission and the PSB recently took public testimony about this. Over 100 local people turned out to voice their concerns at each meeting, raising such issues as the unknown risk involved in running an old reactor like VY 20% harder, the generation and storage of 20% more waste and the application of this experimental technology to an aging nuclear reactor.

Hinsdale, NH boycotted the recent VY evacuation drill, saying that the town wasn't receiving enough money from the state of NH to run the drill properly. In Vermont, Governor Douglas has requested that Entergy raise the amount they give the state for emergency planning to $1.1 million from $800,000, but it was rejected by the Vermont House and Senate. This would shift the burden to Vermont taxpayers and become another subsidy for nuclear power which is unacceptable. Entergy should pay it's own way.

Vermont Windham county lawmakers have questioned the effectiveness of the NRC and are calling for a review of the agency. It was drafted by State Rep. David Deen and was signed by 10 other legislators. The letter asks for a review of the NRC in the coming year and questions whether the NRC is staffed adequately and if it really has the leadership necessary to function as a true watchdog agency over reactors.

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CITIZENS AWARENESS NETWORK

NUCLEAR POWER AFTER 9/11 ***Summer 2003***

Along comes terrorism....

Before 9/11 the threat of nuclear reactors as targets for terrorism seemed to many remote and unlikely. Although the possibility had been raised many times by citizen groups, the NRC always treated it as a non-issue. Now, the public and even some politicians have acknowledged that reactors and their fuel pools are known targets. However, the nuclear industry, the NRC, and the Dep't of Homeland Security have so far been negligent in securing nuclear sites, waste shipments and dumps, in effect refusing to protect the communities that are most threatened. CAN is working to educate and organize reactor and waste communities, legislators, and the NRC to institute new ways to resolve our security concerns.

The Problem...Reactor sites are targets....

Several European newspapers have reported that in an interview with a journalist from Al-Jazeera, *two top Al-Qaeda commanders said that the original plan for the attacks carried out on 11 September 2001 was to target two unnamed nuclear power stations. Apparently fearing that such an attack "might get out of hand", Al Qaeda chose other targets instead.* *Reuters, 10 September 2002*

On 8 September, the Spanish newspaper *El Mundo*, and the *UK Sunday Times*, ran stories in which Al-Jazeera journalist Yosri Fouda described how he interviewed two Al Qaeda leaders, Khaled Sheikh Mohammed and Ramzi Binalshibh. Mohammed said that when Al Qaeda first decided two and a half years ago to launch a suicide attack in U.S. territory, the original plan was to attack a couple of nuclear installations. However, they then decided against it for fear it would "get out of hand" (or "get out of control", according to the English version). Anyway, it was decided to abandon the idea of attacking nuclear targets - "for now". Fouda asked, "What do you mean by 'for now'?" "'For now means for now' ", replied Mohammed, implying that nuclear installations might be considered as Al Qaeda targets in the future. *NIRS/WISE News Communique 554.5315*

The threat of nuclear terrorism .... real, immediate, and increasing.....

A typical nuclear reactor site contains more than 1,000 times the radiation that was released from the bomb dropped on Hiroshima. The consequences of a terrorist attack on the irradiated fuel would be catastrophic! A successful attack on Vermont Yankee's irradiated fuel pool would leave Vermont, Massachusetts, and New Hampshire, **25,000 sq. miles, uninhabitable for decades.** Entergy is now petitioning the state of Vermont and the NRC for approval to increase power at its Vermont Yankee reactor by 20%. This controversial uprate increases Entergy's profits at the expense of our security. **If the uprate is approved, a terrorist attack or accident at Vermont Yankee could *release 34% more contamination* into our community.**

The NRC has estimated that a single attack on a nuclear reactor could result in **100,000 deaths** in the first year, **600,000 immediate injuries**, and **40,000 long-term cancers**. 25-50 million curies of high level waste is stored in the fuel pools, even after a reactor shuts down. Dry cask storage, now employed at the decommissioned Yankee Rowe in Massachusetts, is also vulnerable. In fact, fuel pools and dry cask storage are less secure and more vulnerable because they lie **outside** the containment buildings. **No existing form of waste storage could withstand an attack like America experienced on 9/11.***

** NRC Chairman Richard Meserve told a House subcommittee 'No existing nuclear facilities were specifically designed to withstand the deliberate high-velocity direct impact of a large commercial airliner, such as a Boeing 757 or 767."*
May14, 2002 ***washingtontimes.com/national***

THE EXPERIMENT IS OVER!

www.nukebusters.org can@nukebusters.org

CAN Responds ... HOSS.....HARDENING REACTOR SITES....

Reactor and waste security must be a key part within any strategy of "homeland security". Washington's attention is directed to overseas elimination of terrorism through aggressive acts. If America can harden its most vulnerable nuclear targets, we can reduce both our fear of attack and subsequent aggression in the world.

The NRC's refusal to respond rationally to the threat forces communities to protect themselves. CAN commissioned Dr. Gordon Thompson of IRSS (Institute for Resource and Security Studies) to analyze the vulnerability of reactor spent fuel pools and dry cask storage. His paper outlines a plan to remove the fuel from the overstocked pools, and place it in hardened, dispersed, dry storage - **hardened on-site storage** or **HOSS.** Dr. Thompson was instrumental in getting Germany to harden its waste storage, which is far superior to American storage. The NRC must be required by Congress to secure sites and decrease their inherent vulnerability. This can be done under the Homeland Security Act.

A more detailed report on HOSS is now underway. IRSS would conduct technical and policy analysis on; (a) the vulnerability of US nuclear power plants and their spent fuel to attack by foreign or domestic enemies and ; (b) protective measures that could provide defense in depth against attack. Each nuclear site would generally be viewed as a "hazard unit", to ensure that the analysis accounts for interactions among facilities at the site. Transport of spent fuel to a possible national waste repository would also be addressed. Technical findings from the analysis would be set forth in written reports. IRSS would present the findings at public and professional meetings and would testify before official bodies. These findings would help to create a national debate on homeland nuclear vulnerability and educate the public to pressure their legislators to mandate the NRC to defend reactor sites.

Communities Under Attack!....

CAN is organizing a campaign *Communities Under Attack!* to address the concerns of reactor and waste communities. It includes the creation of significant on-site deterrents in the storage of fuel, response of reactor personnel and state officials to a potential terrorist attack, and minimizing of risk to reactor communities. HOSS requires removal of the waste from overcrowded fuel pools for storage on site in hardened casks that would offer significant protection. The risks at reactor sites and waste dumps are closely linked. Hardening sites acts as a deterrent to terrorism and affords communities an additional measure of security. HOSS is an interim solution for the high level nuclear waste crisis and reduces the pressure to target Native American land for nuclear waste dumping since the waste can remain on site until a scientifically sound and environmentally just solution can be developed.

HOSS can unite communities in opposition to nuclear power, nuclear waste and environmental racism, building networks of activists in impacted communities . We are now working with groups across the country to include HOSS as an educational and organizing tool.

We will pressure legislators to mandate that the NRC institute HOSS nationally addressing nuclear insecurity and the safeguarding of reactor sites and affected communities.

CAN needs your help to do this important work.

We need your support to continue to grow, to organize, and help communities have more control over their environment while creating a future that is safer for them and their children.
And perhaps most importantly, to continue to keep democracy vital, alive and powerful.
Won't you please be as generous as possible and help?

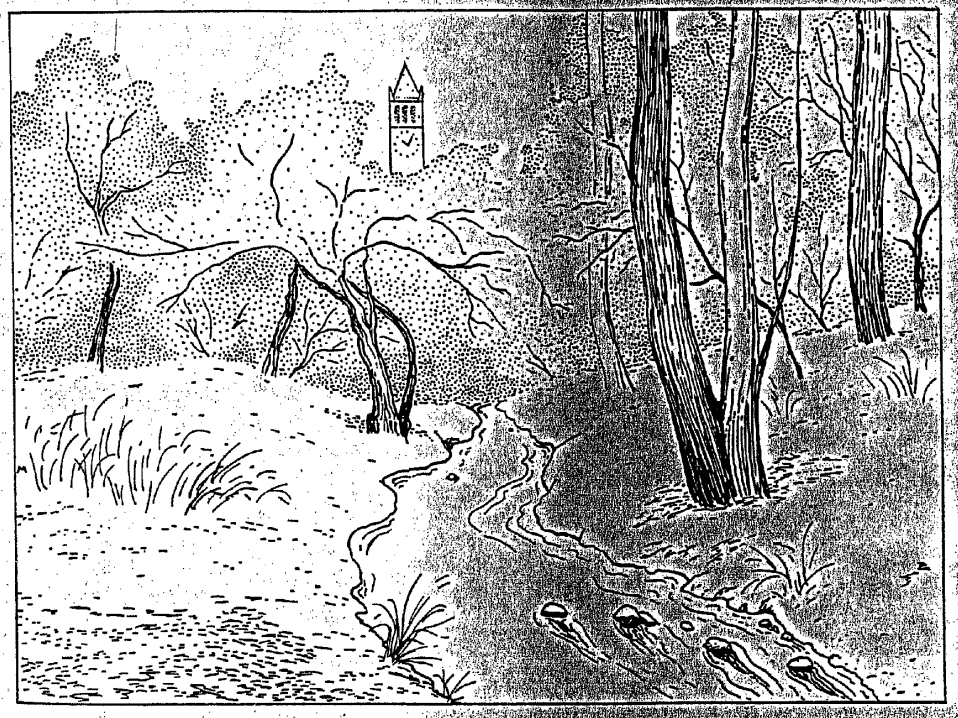
Thank You for your continuing support!

D. Katz

Deb Katz, Executive Director

CAN is a grassroots, volunteer organization concerned with environmental pollution and health issues surrounding exposure to toxins. The scientific community and the nuclear industry have undermined citizen's confidence in their ability to understand atomic power and its effects. CAN seeks to demystify these issues, with the goal of enabling citizens to reclaim democratic control over their environment and develop strategies for the prevention and elimination of pollution.

STRAWBERRY CREEK MANAGEMENT PLAN



prepared by

ROBERT B. CHARBONNEAU

for the

Office of Environmental Health and Safety
University of California at Berkeley
December 1987

Excerpts from:

The Strawberry Creek Management Plan

prepared by
Robert B. Charbonneau
for the
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University of California at Berkeley
December 1987

Executive Summary

Strawberry Creek represents an irreplaceable natural resource that is highly valued by both the University and community at large. The riparian corridors along the creek are the focus of central campus open space. These areas offer natural contrast to the urban hardscape, acting as a buffer zone which provides visual amenity and variety. The creek corridors also provide essential places for educational, recreational, social and individual activities. Strawberry Creek's value as an educational resource is enhanced by its accessibility and proximity to classroom facilities.
The upper Strawberry Creek watershed located above Oxford Street in Berkeley, CA is composed of two major branches, the North and South Forks. The total watershed area is 1163 acres or 1.8 mi2. Stormwater routing as well as stream culverting and channel confinement have significantly altered the natural drainage courses of both forks. The two forks converge at the Eucalyptus Grove on the central campus to form the Main Branch.

The watershed is approximately 40% urbanized, primarily by institutional land uses in the western portion of the watershed. Urbanization has had a profound impact on the hydrologic regime of Strawberry Creek. A significant amount of impervious surface area in the watershed in addition to culverting and confinement of the natural creek channels and stormwater routing have combined to create a very flashy hydrologic regime. The resulting high peak storm flows have accelerated streambank erosion and led to the destruction of aquatic habitat.

Low flow water quality of Strawberry Creek is fairly good in the canyon areas but has been degraded in the urban ized downstream reaches by eutrophic nutrient levels and fecal bacterial contamination. Sewage contamination on the central campus is a major problem. Point source effluent also significantly alters the water chemistry of the North Fork on the central campus. This is due to extensive dilution of natural stream flow levels with point source effluent, predominantly cooling water. Stream flows are doubled by the addition of point source effluent on the central campus during low flow periods.

Stormwater runoff from the entire watershed is routed directly into Strawberry Creek causing significant degradation of water quality. Runoff from streets, parking lots and other urban land surfaces concentrates debris and pollutants deposited by a myriad of sources in the urban environment This results in substantial increases in chemical oxygen demand, suspended solids, turbidity, organic nitrogen, phosphorus, total and fecal coliform bacteria, as well as trace metals in Strawberry Creek during wet weather. Non-point sources of pollution have a significant short-term "shock loading" effect on the water quality of the creek.

Creek management strategies consist of point source pollution controls, grade control and streambank stabilization measures, as well as riparian and aquatic habitat restoration techniques. The sources of direct discharges into Strawberry Creek need to be further investigated. All wastewaters should be routed to the sanitary sewer system. Rehabilitation of existing grade control structures is essential to prevent further downcutting of the streambed whichl

eads to streambank undercutting and scouring of the streambed. Biotechnical streambank stabilization techniques should be applied in applicable areas to deal with existing bank erosion problems. Management guidelines need to be evaluated and implemented for the designated central campus nature areas which coincide with the riparian corridors of Strawberry Creek.

Best management practices need to be instituted for non-point source pollution control. Priority should initially be given to implementing non-structural stormwater management techniques. An annual monitoring program would en able the continuing evaluation and redefinition of water quality problems. Environmental management of Strawberry Creek must be far-sighted and comprehensive in scope in order to adequately protect and enhance the creek and its associated riparian areas. The recently formed Creek Environmental Quality Committee should form the basis for l ong-term management. A multitude of approaches including the updated Long Range Development Plan, environ mental impact reports, RFP conditions, and Department of Facilities Management policies and directives can be util ized to ensure consideration of the environmental concerns identified in this report in the campus planning process an d operations.

Introduction

Strawberry Creek has been neglected for many years and subsequently the environmental quality of the creek and its associated riparian areas has continued to deteriorate. The degradation of this sensitive area is evident on the cen tral campus of the University (Figure 1). This is manifested by a marked absence of diverse flora and fauna in the creek itself and along its banks. The water is periodically discolored, foaming occurs, and other obvious signs of poll ution are evident. The streambanks are undercut, threatening walls, bridges, and other structures built in close proximity to the creek. Sedimentation and turbid waters are commonplace. The variety of wildlife in the riparian areas is limited and has reportedly been steadily declining over the years (Siri, 1972).
Until the present time there has been little attempt to consider Strawberry Creek in the campus planning process. A general lack of knowledge by the Department of Facilities Management (DOFM) and the Campus Planning Office concerning the problems facing the creek and the impacts of past, present, and future activities and development has resulted in the degraded conditions apparent today. This situation has been compounded by fiscal constraints that have been placed on campus operations in recent years. A great need exists to incorporate environmental concerns surrounding the creek into the operations, maintenance, and planning processes within the University.

The Office of Environmental Health and Safety (EH&S) recognized the deteriorating environmental quality of Strawberry Creek and the lack of any comprehensive management plan. This study was subsequently initiated at the request of EH&S. The study began as a water quality management plan with the following objectives:

- Evaluate present water quality of the creek.
- Identify point and non-point sources of pollution.
- Develop creek and watershed mitigation strategies.
- Produce a resource document on which future evaluation and management decisions could be based.
- Provide an overview of historical data.

In order to formulate a truly comprehensive management plan, the scope of the study necessarily expanded from strictly a water quality management plan into the areas of urban creek and riparian habitat preservation and restoration.

The benefits of preserving and enhancing Strawberry Creek and its riparian areas are multi-faceted. The visual and experiential image of the Berkeley campus is manifested by its physical setting which is dominated by the features an d character of its landscape. The natural areas on the central campus consist primarily of the riparian zones along both forks of Strawberry Creek. These areas offer natural contrast to the urban hardscape, acting as a buffer zone which provides visual amenity and variety. The creek is the major focus of campus open space and therefore establ ishes both the form and character of its landscape. Preservation is essential if the unique image and qualities of the

campus are to be sustained.

The riparian corridors of Strawberry Creek provide essential places for educational, recreational, social, and individual activities. The creek functions as an integral part of instruction in the social sciences, natural sciences, and engineering. A conservative estimate of the number of students using these areas annually is about three thousand. Siri (1972) also found that at least eighteen courses in ten different departments utilized the natural areas on campus. Siri also documented the use of the riparian areas for faculty and graduate student research.

The value of Strawberry Creek as an educational resource is enhanced by its accessibility. The financial and logistical constraints of field trips, especially in introductory classes with large enrollments, are not a problem when the use of Strawberry Creek is considered. The time limitations of travel elsewhere also promote the increased utilization of the creek areas. The creek is also valuable for spontaneous use for the purposes of illustration, demonstration, and repeated observations. In addition, Strawberry Creek offers everyone an informal educational opportunity through exposure, experience, and chance observation. It is obvious that the creek and its associated riparian corridor represent a significant teaching resource that warrants attention, maintenance, and enhancement.

Creek and Watershed Description

This section provides a description of the physical and natural setting of Strawberry Creek and its upper watershed. This section also contains an historical overview of development in the watershed and its subsequent impacts, as well as descriptions of the watershed soils and geologic conditions.

General Description

This study deals with the upper Strawberry Creek watershed which lies east of Oxford Street in Berkeley. This area includes all lands owned by the University of California that may influence the water quality of Strawberry Creek. The entire runoff from the 1163 acre (1.8 mi2) watershed is delivered to the entrance of the city culvert at Oxford Street which runs underground in a westerly direction, eventually emptying into San Francisco Bay near University Avenue.

Strawberry Creek has two main branches, the North and South Forks. The South Fork is a fourth order stream, whereas the North Fork is a third order tributary. The confluence of the two forks is located in the Eucalyptus Grove at the western edge of the central campus about 400 feet east of Oxford Street. On the central campus alone there is approximately 6270 linear feet of stream course. Stormwater routing and stream channel culverting has greatly altered the natural drainageways in both the North and South Fork subwatersheds.

The South Fork subwatershed comprises 759 acres (1.2 mi2). It is bounded by the Panoramic-Sugar Loaf ridge on the south, Frowning Ridge (Grizzly Peak) on the east and the North Fork subwatershed to the north. Hamilton Creek drains the southeastern portion of this watershed and joins Strawberry Creek below the Botanical Garden. Another unnamed branch drains the area from Grizzly Peak to the Animal Behavior Research Station and joins Strawberry Creek just above the retention dam.

An earthen retention dam is located at the entrance to the lower fire trail in the canyon. Its function is to protect the central campus and Haas Recreation Area from flood damage. The "Big Inch" bypass culvert begins at the dam and carries all upper canyon drainage underground to its outlet adjacent to the Faculty Club on the central campus. Chicken Creek and two other unnamed tributaries which drain the western portion of the Lawrence Berkeley Lab (LBL) complex and the central canyon area are routed directly into the Big Inch bypass culvert.

The original Strawberry Creek channel continues downstream of the retention dam and becomes the "Little Inch" bypass culvert when it enters a drop inlet located just above Haas Recreation Area The Little Inch culvert travels underneath the stadium and empties adjacent to the Women's Faculty Club. A small open channel then connects this

culvert to the South Fork at the outlet of the Big Inch culvert next to the Faculty Club. Flow in the original creek channel below the retention dam is supplied solely by local runoff. A low flow bypass once diverted flow through the retention basin dam to the former creek channel, but the pipe inside the dam has collapsed. A subdrain which underl ies the old creek bed from the retention dam to the drop inlet above Haas draws groundwater out of the channel during dry periods, resulting in this section of channel drying up most of the year.

The South Fork on the central campus is therefore made up of flow carried by the two bypass culverts from the can yon. This fork meanders through the southern side of the campus and eventually meets the North Fork in the Eucal yptus Grove to form the Main Branch of Strawberry Creek. The South Fork travels about 3670 linear feet on the central campus, dropping about 110 feet in elevation for an average gradient of 3 percent. Likewise, the Main Bran ch runs about 450 linear feet from the Eucalyptus Grove the entrance of the city tunnel at Oxford Street, dropping 15 feet, or about a 3 percent grade.

The North Fork subwatershed comprises 388 acres (0.6 square miles). It is bounded by Little Grizzly Peak on the east, Rose Street on the north, and the South Fork subwatershed to the south. The North Fork, which originally drained just Blackberry (Woolsey) Canyon, has also been identified as Blackberry Creek, although this is a misn omer because another creek in North Berkeley has that name. Due to stormwater routing, the channel above Highl and Avenue now drains a large portion of the LBL complex, Lawrence Hall of Science, and Space Sciences L aboratory, extending all the way to Grizzly Peak Boulevard. Much of the North Fork has been culverted underneath the LBL complex and North Berkeley. An extensive artificial fill area is located in the original creek channel north of the Lawrence Hall of Science and cut and fill operations also obliterated the original North Fork channel throughout the LBL complex. Open channels along the North Fork still exist in Blackberry Canyon below LBL, between a few blocks in North Berkeley, and on the central campus.

The open channel in Blackberry Canyon dumps into a drop inlet above Highland Avenue. During low flow periods, the creek is directed into an open channel south of Le Conte Avenue which enters a tunnel under Northside and empties into the central campus at North Gate. At times of high flow, most of the water in the North Fork is diverted into a 48"- 60" storm drain culvert which runs down Ridge Road to Euclid Avenue and thence to the creek at North Gate.

The North Fork watershed has been extended beyond its natural drainage area to the north due to stormwater routing. Euclid Avenue and La Loma Avenue storm drain lines extend as far north as Rose Street. These storm lines eventually dump into the North Fork city tunnel which empties into the open channel on the central campus at North Gate.

The North Fork then meanders through the northwest portion of the central campus and is routed underneath West Circle into the Eucalyptus Grove where it meets the South Fork. The North Fork travels approximately 2150 linear feet on the central campus, dropping about 80 feet in elevation for an average grade of 4 percent. This is slightly steeper on the average than the other central campus reaches of the creek. The cross-campus culvert empties into the North Fork just above the University Drive vehicle bridge. This culvert drains the northeastern section of the cen tral campus, continues eastward under Gayley Road by Stern Hall, and across Cyclotron Road to the Cafeteria Creek channel which drains a small portion of the LBL complex. The cross-campus culvert is the single largest point source on campus in terms of both drainage area and volume of effluent.

The remaining 16 acres of the upper Strawberry Creek watershed drain directly into the Main Branch of the creek above Oxford Street. Much of this area consists of Evans Field and Edwards Track Stadium drainage which is routed directly into the Main Branch.

The upper Strawberry Creek watershed generally lies in the California Coast Ranges section of the Pacific Border physiographic province. The steep southwestward-facing front of the Berkeley Hills trend northwestward at the head of Strawberry Canyon. The Hayward Fault roughly parallels Gayley Road, forming the toe of the hill slope.

West of Gayley Road the land surface including the central campus gently slopes west-southwestward towards San Francisco Bay.

The topography of Strawberry Canyon is almost totally fault-controlled. Along with related severe erosion this has formed the existing canyon and drainage system east of the Hayward Fault. Canyon topography consists generally of a complex pattern of relatively small secondary ridges and nosings separated by an intricately branching canyon system which resulted from a combination of faulting and erosion. Except for lower Strawberry Canyon, the area is generally steeply sloping, averaging about twenty-five percent. The existing extensive level areas in the canyon are a result of construction grading activities. Elevation ranges from about 1760 feet at the crest of the Berkeley Hills down to 200 feet at the west end of the central campus (Oxford Street), constituting a drop of over 1500 feet in el evation in the upper watershed.

Historical Perspective

This abbreviated history gives an indication of the adverse impacts development has had on Strawberry Creek. A l ong history of water quality problems, flooding, and erosion becomes apparent. Extensive diversions and stream course channelization and alterations have occurred over the past eighty years. Construction costs for storm drain age systems and flood damage to the University over time has been quite significant.

Prior to the arrival of the Spanish and other white settlers to Cal iforniain the late 1770's, native Indians of the Huchiun-Ohlone group lived in clustered settlements along streams such as Strawberry Creek. They once maintain ed a summer camp near the present site of the stadium. The Indians were hunter-gatherers who managed their land by controlled burning of the underbrush to facil itate acorn gathering and the growth of seed-bearing annuals. The lan dscape appeared as an open oak woodland and grassland filled with perennial bunch grasses and herbaceous fl owering plants. Much of the tree cover was limited to the stream channels, and strips of riparian vegetation closely followed the steam corridors from the crests of the hills down to the alluvial flatlands. Deer, elk, bear, and mountain l ions were abundant in the hills. Salmon and trout spawned in the upper reaches of the creeks.

On March 27, 1772, a Spanish scientific expedition led by Don Pedro Fages stopped along the banks of Strawberry Creek just upstream of present-day Oxford Street. From this future site of the University, diarist Juan Crespi described the beauty of the Golden Gate vista. Legend has it that the creek got its name from the abundant strawberry vines that lined its banks. Spanish explorers named the East Bay area "Contra Costa" or "opposite coast". In the early 1800's much of the East Bay was partitioned into land grants by the last Spanish governor of Cal ifornia. The boundaries of these tracts were often delineated by streams because they were the most obvious lan dscape elements. The Rancho San Antonio tract which was deeded to Don Luis Maria Peralta in 1820 en compassed the present cities of Albany, Berkeley, Emeryville, Alameda, Oakland, Piedmont, and San Leandro. In 1842, Peralta divided the Rancho among his four sons, and gave his son Jose Domingo the area now called Berkel ey.

The Gold Rush of 1849 opened the East Bay to land development booms. The Berkeley area bore the brunt of the influx of American settlers as development spread across the Bay from San Francisco. Jose Domingo Peralta resisted the first American squatters, but soon realized he could not maintain control over such desirable land. In 1853, Peralta sold off most of his land and the next year Orrin Simmons, a sea captain turned farmer, acquired squatter's rights to 160 acres of land between Strawberry Creek and the present Clark Kerr campus. In 1857, he obtained full title and purchased two more tracts of land, giving him ownership of 700 acres including the future site of the University campus.

In 1860, the College of California moved to its present site from Oakland. Strawberry Creek was one of the main reasons the founders chose Simmons' property. "All the other striking advantages of this location could not make it a place fit to be chosen as the College Home without this water. With it every excellence is of double value" (Willey, 1887). Even during a drought in 1864 the stream continued to flow the entire year, yielding about 1 00,000 gallons a

day or about 0.16 cfs. Three forks of Strawberry Creek meandered through the college site at that time. The middle fork was drained in the early 1870's to create a dry level area for a cinder running track now occupied by the Life Sciences Building Annex. To protect the track from strong westerly winds, the Eucalyptus Grove was planted.

The central campus at this time was a sloping grassy plain dotted with coast live oaks. Oaks, sycamores, bay trees, and shrubs lined both forks of Strawberry Creek. Old photographs reveal considerable tree planting during the 1860's and 1870's in an apparent effort to improve the barren landscape. Cattle were introduced into the hill area in the 1850's and grazed on imported annual grasses which quickly established themselves. Eventually these grasses out-competed the native perennial bunch grasses which could not survive the impacts of heavy grazing. Dairy farms were located in Strawberry Canyon before the land became part of UC holdings in 1909 and cattle continued grazing in the hills until the 1930's. Grass-oak savannah was the vegetative cover in the canyon as shown in photographs taken in 1870 and 1901. The East Bay creeks supported a growing timber trade that significantly depleted the tree cover of the upper creeks. This was especially true during the rebuilding period which followed the 1906 San Francisco earthquake and fire. Eucalyptus was often planted throughout the East Bay hills in the early 1900's by small private water companies as a means of profiting from the shortage of California hardwood lumber at the time.

Waterworks were constructed in Strawberry Canyon in the 1860's to supply water to farms and speculators. Springs were developed, pipes laid, and wooden flumes constructed to carry the water. In 1867, a brick reservoir was constructed in the canyon and waterworks placed to deliver more water. Up until this time the cleared land in the canyon was divided amongst a few farmers. As additional land was cleared in the canyon, runoff from the hills increased, causing severe erosion downstream. In October of 1882 the University built five check dams along Strawberry Creek in an attempt to stop streambed incision and subsequent bank erosion on the central campus.

In 1883, the first large culvert was installed in a small stretch of streambed in the vicinity of Oxford Street to facilitate the passage of horses and wagons. Cement box culverts were installed along the creek throughout its entire length in Berkeley during the late 1800's and early 1900's. This culverting continued until the 1930's when the Works Progress Administration (WPA) finished culverting the last open reaches. The entire length of Strawberry Creek through the city of Berkeley was now underground.

The first report of water quality problems appears in the Berkeleyan in 1895. An article complains of the "unsightly appearance of sewer-begrimed water and filthily discolored banks." Strawberry Creek was noted as being an easy means of removing sewage. In 1900, the Benard Plan for the campus layout originally called for the removal of the creek from the grounds, but was later revised after objections were raised. A storm in March 1904 caused $300 damage to culverts on the central campus and extensively damaged streambanks. This prompted rock and concrete work in many locations along the creek to stabilize the banks. USGS experiments conducted in 1907 estimated that one ton of soil was being carried away for every 12,000 gallons of winter storm flow.

Extensive concrete work was performed on the entire creek in 1907 to protect streambanks and trees. Both the creek sides and bottom were lined with concrete. The creek was also deepened five feet in the reach upstream of Oxford Street in an attempt to avert the flooding of downstream commercial areas which occurred the previous winter. The construction of Memorial Stadium in 1923 necessitated the first major diversion of Strawberry Creek. The stadium obliterated waterfalls that once cascaded down the toe of the hillslope and resulted in the construction of the "Little Inch" bypass culvert to carry the creek underneath the stadium and Strawberry Field. The construction of Stephens Hall that same year also required the rerouting of the original creek channel.

The "Big Inch" bypass culvert was built in 1951 at a cost of $225,000 due to the possibility of structural failure of the Little Inch bypass. Cracks were discovered in the old culvert from the stress caused by the Hayward fault zone. At that time, the Big Inch culvert began just above the Haas pools and emptied out next to the Faculty Club on campus.

Rains in April 1958 caused $70,000 damage to Canyon roads and drainage systems. International House was fl

ooded and landslides blocked Canyon fire trails. Only four years later in October 1962, 15 inches of rain fell in four days, making it one of the heaviest storms ever recorded in the San Francisco Bay area. The Big Inch bypass inlet clogged with debris and the torrential creek overflowed through the Haas complex and down Centennial Drive. Damage to campus buildings and grounds was estimated at over $200,000. As a result of flooding of the Dining Commons in 1963, a 300 foot reach of the South Fork from Sather Gate to the Dwinelle Annex was widened to ten feet and a concrete retaining wall was built along the south bank. In Fall 1964, the University spent $519,000 on storm drain improvements. This action was necessary because of the development in Strawberry Canyon that had reportedly reduced the lag time (the time response of runoff to precipitation) to the bypass culvert entrance in the canyon from about two hours to fifteen minutes, posing a great threat to the campus by significantly increasing the peak storm flow.

In 1966, the University extended the Big Inch bypass inlet to an earthen retention dam built in the canyon at the entrance to the Lower Fire Trail. The retention basin would act to store flood waters during winter storms and flow could be regulated into the bypass culvert by means of a hydraulically operated gate. This structure would act to prevent the extensive flooding and damage that occurred in 1962. Also in 1966, a high flow bypass was built into the North Fork city tunnel system to relieve the flooding threat caused by increased runoff from LBL development in the canyon. These storm drain improvements were done at a cost of $145,000 which was shared by the City and the University.

Various newspaper articles in the 1970's and 1980's relate the continuing water quality problems in the creek. A 1973 article tells of fecal bacteria contamination entering the North Fork from the Northside area. Continued erosion of stream banks is also mentioned. A 1981 article states that the creek is treated as a sewer contaminated by urban runoff, chemicals, drains, and sewage. Berkeley Health Department officials advised not to enter the creek at that time.

Soils

The USDA Soil Conservation Service (SCS) Soil Survey of Western Alameda County was used to delineate the soil types of the upper Strawberry Creek watershed. The soil types are presented in Table 2 and shown on Figure 3. Soil series may be assessed for their runoff potential, risk of erosion, and other parameters of concern in the management of Strawberry Creek and its watershed. In general, the upper watershed soils are highly impermeable and have a high runoff potential as well as a high risk of erosion. Strawberry Canyon is the site of numerous landslide bodies that will easily slide when undercut or flow when saturated. Development on the Canyon soils is severely constrained by steep slopes and shallow depth to bedrock.

Hydrologic soil groups as defined by the SCS can be used to estimate runoff potential of each soil type in the watershed based upon its infiltration capacity. Infiltration rates decrease and surface runoff potential increases as soil types are classified A through D. Approximately 38% (431 ac) of the watershed consists of soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. Soils having a very slow to slow infiltration rate comprise about 23% (234 ac) of the watershed, whereas 1% (18 ac) of all the watershed soils have a slow infiltration rate. Soils with a very slow to moderate infiltration rate account for 20% (234 ac) of the watershed. The remaining 18% (209 ac) of the watershed area is unsuited to the hydrologic soil classification system because it is covered by urban structures or comprised of heterogeneous artificial fill materials.

Three different soil types account for 75% (736 ac) of the upper Strawberry Creek watershed area. Maymen loam is the predominant soil type in the watershed (366 ac or 32%). This is a shallow (10-20 in) somewhat excessively drained soil with rapid to very rapid runoff potential and high to very high risk of erosion. It is found on upland areas with slopes of 30-75%. The pH range of Maymen loam is strongly acid (4.5-6.5). This soil type formed in material that weathered from sedimentary rock. It is generally underlain by sandstone, siltstone, and conglomerate.

The Maymen-Los Gatos complex is another dominant soil type in the watershed, comprising 265 acres (23%). This

complex consists of steep and very steep soils on uplands. Slopes range from 30-75%, but are mainly 50-75%. This soil complex is composed of 50% Maymen soils and 35% Los Gatos soils. The remaining 15% of this soil type are small areas of Millsholm silt loam and some rock outcrop. Depth to bedrock ranges from shallow to moderately deep (10-40 in). Runoff and erosion characteristics are identical to Maymen loam. The pH of this complex ranges from strongly acid to neutral (4.5-7.3). The Maymen-Los Gatos complex formed in material that weathered from sedimentary rock and is underlain predominantly by sandstone and shale.

The last major soil type is the Xerorthents-Millsholm complex which comprises 20% of the watershed area. This complex is on hills at slopes ranging from 30-75%. It consists of about 70% loamy Xerorthents (altered soil or fill material), 20% Millsholm clay, and 10% of small areas of Maymen loam, Los Gatos loam, and Los Gatos silty clay loam. Depth to bedrock ranges from shallow (10-20 in) to over 20 inches. This complex is well to somewhat excessively drained. Runoff is rapid to very rapid and risk of erosion is high to very high. The pH of this complex ranges from medium acid to slightly alkaline (5.6-7.8). The xerorthents in this complex consist of soil materials that have been altered by cutting or filling for urban development and, as a result, they have variable soil characteristics. The Millsholm soil formed in material that weathered from fine-grained sandstone. This soil complex is generally underlain by sandstone, siltstone, and undivided Quaternary deposits.

Geology

The upper Strawberry Creek watershed consists mostly of the geologically very recently uplifted Berkeley Hills which hinge along the northwest trending Hayward fault zone. In general, the steep hill area is unstable and bedrock is close to the surface, resulting in numerous landslides and extensive soil erosion. The hill area is part of a very complex volcanic vent structure that has been truncated and displaced northward by the Wildcat Fault. West of the Hayward fault zone is a gently westward sloping older alluvial plain which has been altered in the Central Campus and LBL areas by cut and fill construction activity. The subsoil in the Central Campus consists of soft, highly erodable stream sediments grading from clayey silts to cobbles and boulders. These sediments exhibit very poor stability along the banks of Strawberry Creek.

The bedrock in the Canyon grades time-wise from Upper Cretaceous marine sediments through Miocene sediments (Claremont Formation) to the late Pliocene sediments and volcanics of the Orinda, Moraga, Grizzly and Bald Peak Formations. A series of earth movements extensively folded and faulted these formations and massive volcanic intrusion has further altered the bedrock. The resultant formational contacts are steeply sloping to vertical and the time sequence is thus commonly horizontal rather than lying in vertical succession. The character of the rocks varies widely, ranging from fairly hard sandstones in the Cretaceous series to soft and clayey semi-shales of the late Pliocene deposits. The volcanic members vary from extremely hard but generally intensely fractured basalts to soft tuffaceous sediments.

The Upper Cretaceous rocks underlie about 16% (186 ac) of the watershed between the Hayward and Wildcat Faults bordering both sides of Strawberry Creek. These sediments are the oldest rocks in the hill area, consisting of fragments of older rocks which have been significantly altered and fractured by tectonic movements. These rocks are moderately to highly weathered, soft to medium hard, and locally folded. This unit weathers fairly easily, producing thick residual soils that often migrate downhill by landslides or by colluvial processes.

Most of the northern area of the watershed between the Hayward and Wildcat Faults is underlain by the Moraga-Grizzly Peak-Bald Peak Formations (180 ac). These are extrusive igneous rocks that have been altered by shearing and weathering, and are highly fractured. These formations are permeable enough to permit rapid and extensive water circulation. Generally, the rocks are medium to completely weathered, soft to medium hard and very thickly bedded. The Grizzly Peak unit is slightly weathered and very hard with medium-spaced (8-24 inches) fractures.

East of the Wildcat Fault lies the Claremont Formation (163 ac) which consists mainly of thin bedded shales and siltstone of moderate hardness. The rocks are generally fairly siliceous or have an appreciable calcite content and are

thus relatively hard, resistant to erosion, and stable at quite steep slopes. Although porous, these rocks are not very permeable because pore openings are very small and poorly interconnected.

The Orinda Formation (154 ac) lies to the east of the Claremont Formation and also occurs in pockets between the Hayward and Wildcat Faults. These rocks are soft and relatively easily eroded so they are unstable at steep slopes, especially when saturated. These rocks have been extensively degraded by both tectonic shearing and intense surface weathering. The majority of the numerous large landslides in the canyon have been based in Orinda Formation materials. Hillslopes are commonly covered with a mantle of landslide debris that will easily slide when undercut or flow when saturated. Debris or mudflows in the canyon pose a major hazard because obstructions may clog inlets to the storm drain system and divert flow out of normal channels, resulting in extensive damage. Much of upper Centennial Drive and parts of the Lawrence Hall of Science are located on the Orinda Formation, as well as most LBL facilities.

The last major geologic unit in the watershed is the Moraga Formation (126 ac) which is located mainly in the steep northeastern hill area. These rocks are generally hard, but intensely fractured due to both natural shrinkage processes upon cooling and tectonic movements which occurred after deposition. Permeability is therefore generally high. The Moraga Formation is stratigraphically and topographically the highest bedrock unit in the hill area, capping the upper hills and the Grizzly Peak ridgeline on the northeastern boundary of the watershed.

Numerous landslides occur in the hill area, especially in the vicinity of the LBL complex. These slides are composed of substantial soil and rock masses that have slid downslope along a failure plane. They may occur rapidly in a single major event or slowly through repeated small failures. New or old slides may be precipitated by high groundwater levels, ground shaking, or changes in slope geometry and loading. Slides can often be recognized by a bulging, cracked "toe" at the lower end, and by arched headscarps and topographic depressions at the upper end. In the Berkeley Hills some thick mobile accumulations of colluvium (soil and rock fragments transported downslope by gravity) closely resemble shallow landslides, making it difficult to distinguish between them. Most older landslides are marked by heavy brush and tree cover because the vegetation prefers the relatively soft wet soil found there.

The Hayward fault zone is a member of the San Andreas Fault system which is a major geologic feature and plate boundary along which massive continental drift is presently occurring. The Hayward fault zone forms a distinct geologic break between the Central Campus area to the west and the hill area to the east. The Wildcat Fault is another significant geologic feature in the watershed, and is probably a secondary member of the San Andreas system. This fault traverses the Canyon in the vicinity of the Botanical Garden.

The Hayward fault exhibits right-lateral movement, with the westerly side moving to the northwest in comparison to the easterly side. Slow tectonic creep (movement) is presently continuing along the fault at the rate of about 0.1 inch per year in the area of Memorial Stadium. The "Little Inch" Strawberry Creek drainage culvert under the stadium has been previously damaged by this movement.

Tectonic creep has produced major tension and compression faults east of the Hayward fault zone and the tectonic movements which caused the uplift of the Berkeley Hills has produced thrust faulting as well. The result is a complex system of cross-faults with both vertical and lateral movement. One such secondary fault has formed the canyon of the South Fork of Strawberry Creek above the stadium. These faults range in size from very small breaks to the Hayward fault zone, which is several hundred feet wide.

The Hayward fault zone can be assumed to the active along its entire length. Severe earthquakes were caused by movement along faults within the Hayward fault zone in 1836 and 1868. Ground rupture was reported across the west side of the Clark Kerr campus and northwestward between Prospect and Warring Streets. Future movement within the Hayward fault zone may or may not follow the same fault trace. The trace should not be construed as indicating the only line within the zone where movement has taken place in the past, nor is it necessarily the line where movement will occur in the future.

Structures which lie within or across the Hayward fault zone may not only be damaged by sudden movement, offset, and rupture along a fault in the event of an earthquake originating in the fault zone, but may also be subject to constant strain and damage due to opposite sides of faults within the zone continuously moving very slowly in opposite directions.

The Wildcat Fault is also a right-lateral fault with apparently local vertical movements. This constitutes another major structural non-conformity in the watershed. This fault has undoubtedly been active in relatively recent geologic time. Whether creep is currently occurring along the fault or whether there is currently any hazard of displacement is not known with any degree of certainty. East of the Wildcat Fault the secondary fault pattern continues with less expression, apparently reflecting lesser total long-term movement. These secondary faults are presumably currently inactive. The fractured rocks along any of these faults form numerous passages for groundwater.

The most recent geologic studies of the complex hill area (Converse Assoc., 1984) suggest that a single deep groundwater table may exist in combination with numerous perched groundwater tables. The perched groundwater areas may exist seasonally or only after periods of heavy rainfall. The local presence of groundwater in the hill area is also strongly influenced by the presence of seepage barriers such as faults and the numerous Orinda-Moraga formational contacts. The primary sources of groundwater in the hill area were deduced to be surficial (runoff and infiltration) as well as the volcanic flow rocks east of the Wildcat Fault.

Groundwater may move relatively freely through the highly fractured Moraga rocks, but is impeded by the relatively impermeable contact zone and less permeable nature of the Orinda rocks. This restriction of groundwater flow results in an accumulation of water at and above the contact zone of these two formations. Flow occurs along these contact zones when gradients are sufficient and often exits the hillsides in the form of springs or seeps. A strong correlation exists between spring locations and Orinda-Moraga contacts. These contacts are highly irregular because of the interbedded nature of these formations, so springs do not occur at any given elevation on the hillsides.

Chemistry of Water

ATTACHMENT # B

PRESSCUPPINGS

FROM LOCAL NEWS PAPERS

OPPOSING

LBNL'S PLAN FOR THE CONSTRUCTION OF BUILDING 49 AND G-4 PARKING LOT

(TIME PERIOD JULY 4 – 31, 2003)

ATTACHED PRESS CLIPPINGS:

(1) BERKELEY DAILY PLANET (7/4-7/03 ISSUE)
COMMENTARY: "LAWRENCE LAB INFILL PROJECT THREATENS CREEK, WILDLIFE"

(2) BERKELEY DAILY PLANET (7/8-10/03 ISSUE)
FEATURE ARTICLE: "LBNL PLANS TO FILL VALLEY FOR PARKING" / LETTERS TO THE EDITOR: "INFILL PROJECT"
ALSO "CITY WEIGHS CLOSER WATCH ON LBNL"

(3) THE BERKELEY VOICE (7/11/03 ISSUE)
"PLAN TO PAVE CREEK ANGERS NEIGHBORS"

LETTERS TO THE EDITOR:
"CREEK PROJECT BUSY"
"PROTECT NATURAL AREA"

(4) THE DAILY PLANET (7/11-14/03) "CITY TO KEEP CLOSER TABS ON LAWRENCE NATIONAL LAB"

(5) BERKELEY DAILY PLANET (7/18-21/03)
LETTERS TO THE EDITOR:
"RESPECT CREEK ORDINANCE"
"SAVE STRAWBERRY CANYON"
"STOP THE INSANITY"
"SAVE CREEK"

(6) THE BERKELEY VOICE (7/18/03) "CITY REMAINS OUT OF CREEK CONTROVERSY"

(7) THE DAILY PLANET (7/22-24/03)
COMMENTARY "LBNL STEWARDSHIP INCLUDES CARING FOR CREEK"

(8) THE DAILY PLANET (7/29-31/03) MESSAGE TO LBNL— CONSIDER ALTERNATIVES TO CREEK INFILL

Weekend Edition, July 4-7, 2003

Berkeley Daily Planet

Volume 5, Issue 27

FREE

Lawrence Lab Infill Project Threatens Creek, Wildlife

By PHIL PRICE

For more than 10 years, I have been proud to be employed by Lawrence Berkeley National Laboratory (LBNL). Although I know that some in the community object to some of the lab's actions, I have generally been pleased with the lab's activities over the past decade, have enjoyed my time there, and I know that our research has been top-notch.

Unfortunately, the lab, in conjunction with UC Berkeley, has just begun the environmental impact report (EIR) process for a project that—if built as planned—will completely bury a small creek and fill most of its valley, in order to build a parking lot. In fact, although LBNL wants the parking lot, that's not the main motivation: really, they just need a place to dump more than 2,000 truckloads of dirt that will be generated by excavating for a new building, and disposing of it on-site will save them a lot of money and a lot of hassle. Where can you dump 2,000 truckloads of dirt? In a valley. It doesn't seem to bother them that the valley is a thriving creek corridor that includes several coast live oaks, supports lots of bird life and is threaded with paths made by the lab's black-tailed deer. In short, the project will:

• Completely bury about 300 linear feet of open creek (a tributary of Strawberry Creek);

• Result in the removal of coast live oaks and other important riparian vegetation;

• Actually fill in (i.e. bury) a riparian corridor with 2,000 truckloads' worth of of dirt;

• Cut away an extremely steep slope for building construction—an inappropriate building site—thus generating the dirt fill in the first place, and

• Construct a new parking lot, thereby actively promoting more vehicle use, traffic and air pollution.

I'm very familiar with this particular creek, having noticed it many times on my daily bike ride home from the lab. When the weather conditions are right, a steady flow of cool air pours down the valley, creating a noticeable local cool zone. Because the valley opens onto the road at a hairpin curve that holds drivers' attention, most employees have probably never noticed this steep-sided valley and its seasonal creek ... but I have, and I don't want to see it destroyed. In fact, I'll quit rather than be a part of an organization that will fill in a creek. I love my job and colleagues, but LBNL cannot be allowed to act so irresponsibly.

More information on the project is available at the lab's Web site, http://www.lbl.gov/Community/env-rev-docs.html, where you want the June 16 "notice of preparation." Most of the other documents there are for another project. (Note: This project is not the nano-technology foundry building, but rather a different building proposal.)

To add to the problems, the building site itself is a poor choice: it contains a grove of coast live oaks, and is very steep—that's why so many truckloads of dirt need to be excavated.

If LBNL committed to cleaning up and re-using sites currently available for building (i.e. not new open space), this project would be unnecessary.

At this point, the lab is "scoping" the EIR. That is, they're figuring out what should be included. It's vital that they consider reasonable alternative sites.

It's also important to immediately show the lab that they are going to face substantial opposition to this ridiculously anti-environmental proposal, so that they consider alternatives before becoming totally committed to it. Filling in a creek to build a parking lot should not be allowed. Please, take a stand.

Dr. Phillip N. Price, a Berkeley resident, works as a scientist in the environmental energy technologies division of LBNL.

Weekend Edition, July 4-7, 2003

COMMENTARY

Weekday Edition July 8-10, 2003

Berkeley Daily Planet

Volume 5, Issue 29

Covering The World of Berkeley

FREE

Erik Olson

JEFF PHILLIBER, LBNL Environmental Planning Group Coordinator, leads a tour of the building site.

LBNL Plans to Fill Valley for Parking

By ANGELA ROWEN

Residents are opposing a proposal by the Lawrence Berkeley National Lab to construct a six-story office building on a sloping one-acre plot of land and pave over a nearby valley to build a parking lot. Many of those neighbors came out on Monday to take a tour guided by LBNL officials as part of the scoping process, a preliminary step required before a draft environmental impact report can be done on a project.

During the scoping phase, residents can learn more about a proposed project and offer suggestions as to what factors should be examined in the subsequent environmental analysis, which is required by state law. The project involves the construction of an office building on 65,000 square feet of land and filling in part of a valley that includes the Cafeteria Creek to make room for a 120-space parking lot.

The tour was attended by about 45 people, including residents, city employees, city commissioners, and LBNL employees. But the most outspoken attendees were environmentalists and neighbors of the proposed site who worry that the project will exacerbate traffic congestion and remove valuable open space.

Because the site of the proposed office building is located on such a steep hill-- the slope is about 90 feet-- workers will have to dig out up to 26,000 cubic yards-- or more than 2000 truckloads-- of soil to level out the land. The preferred plan is to dump that soil into the nearby creek and build a parking lot on top of it. About 300 linear feet of open creek will be buried.

LBNL is considering alternatives to burying the creek,

Continued on Page Sixteen

Lawrence Lab Wants to Fill Creek

Continued from Page One

including an option to ship the soil out to a landfill, either up Grizzly Peak Road or down University Avenue. But Jeff Philliber, LBNL Environmental Planning Group Coordinator, said the parking lot option was the preferred one because it will save money and provide parking in an area that is in dire need of it.

Under the parking lot option, 39,000 square feet of land will be covered with asphalt. Philliber, who guided Monday's tour, admitted that the water quality could be affected by the increased petroleum and other contaminants leaking into the water supply. But he said steps could be taken to mitigate that, such as using devices to separate oil and water. Another resident brought up the question of increased storm water runoff due to the loss of permeable surface. "We will have to look into ways to slow the water down," Philliber said.

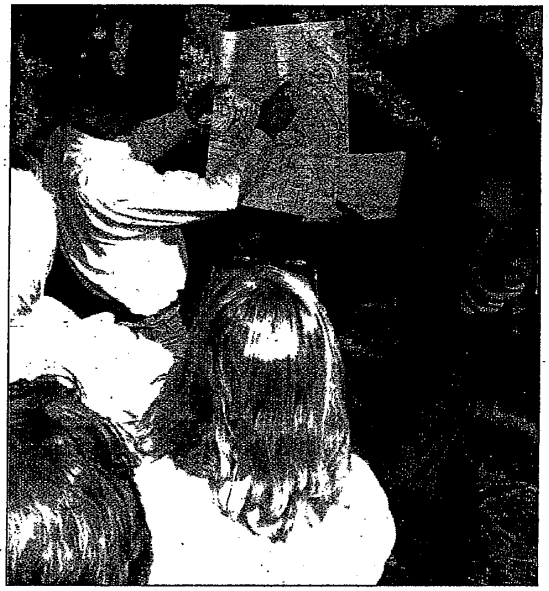
Pamela Shivola, a North Berkeley resident and a creek restoration advocate, said the plan is misguided. "This is beautiful," she said, looking out into the valley, lush with brush and willow, oak and eucalyptus trees. "They just want to kill everything that's alive. The word unconscionable comes to mind."

Daniella Thompson is a neighbor who lives on LeConte street and a member of the Native Plant society. She said the proposed development is "totally intolerable. To fill this creek up with soil is a total outrage against nature. I can't believe they're even proposing it."

Dean Metzger, president of the Claremont Elmwood Neighborhood Association and a transportation commissioner, said LBNL should come up with a plan that encourages transit use. "I think what the people of Berkeley are concerned with is changing the culture of driving so that we get people out of their cars and using public transit," he said. "We are never going to change unless institutions like yours takes a step in that direction."

Philliber said transit-friendly alternatives were "certainly being considered in our long-range plan" and said the lab has been more aggressive than most institutions in encouraging the use of public transportation, pointing to the LBNL shuttle buses as an example.

The city council on Tuesday will consider a proposal by Councilmember Dona Spring to officially oppose LBNL's plan to pave over the creek. It would call on the city manager to send letters to LBNL, the Regional Water Quality Control board and other state agencies to oppose the plan on the grounds that it would "destroy the ecological integrity of the North Branch area of the Strawberry Creek." It would instruct him to write a letter to LBNL outlining the city's policy of prohibiting the removal of live oak trees.



Erik Olson

JEFF PHILLIBER shows the tour group the detailed site plan.

LETTERS TO THE EDITOR

INFILL PROJECT

Editors, Daily Planet:

Regarding LBNL's plans to fill part of a seasonal tributary to the North Fork of Strawberry Creek in order to assist in disposing of construction dirt by building a parking lot, I am very skeptical as to whether all options have been duly studied. Please consider me opposed to this plan, and willing to fight against it, until you have shown that there is no way to avoid destroying yet another of our tiny, remaining natural areas.

I expect that our local politicians will assist in opposing this plan, when they realize the strength of community opposition.

[redacted]

Berkeley Daily Planet Weekday Edition, July 8-10, 2003 Page 3

City Weighs Closer Watch on LBNL

By DAVID SCHARFENBERG

City Council will consider on Tuesday keeping closer tabs on Lawrence Berkeley National Lab and weigh new ordinances that would allow speedy approval of "in-law" housing units—the small backyard cottages or above-garage apartments that dot the city.

Under a measure put forth by Mayor Tom Bates, city staff would conduct a preliminary analysis of all major planned development projects at Lawrence Berkeley Lab, a federal facility operated by the University of California. Under Bates' proposal, Berkeley City Manager Weldon Rucker would also appoint a "lab liaison" from existing city staff to coordinate relations between the city and the national science center.

Bates said the measure was prompted in part by the lab's announcement this year of a plan to build a six-story, 94,000 square foot molecular foundry in Strawberry Canyon. The $85 million foundry would be dedicated to the study of nanoscience, the manipulation of materials at the molecular level.

Community activists and city officials say they were caught unaware by the lab's proposal to expand.

"I feel like the city has not been prepared to deal with the larger problems," Bates said, in reference to the project.

City Councilmember Kriss Worthington said the late notice on the molecular foundry project is part of a larger pattern.

"When the lab does something, we usually find out about it from the community groups protesting the lab and not the lab itself," he said. But Worthington raised doubts about whether one person, the proposed "lab liaison," could keep tabs on the entire lab, especially if that liaison has another job.

> The measure was prompted by the lab's plan to build a foundry.

"In-law" units

City Council will also conduct a first reading of an ordinance that would allow for speedy approval of "in-law" units. The state legislature, attempting to address California's shortage of rental properties, passed a law last year requiring municipalities to streamline the process for approval.

The meeting will begin at 7 p.m. at Old City Hall. A special meeting on the city's workers' compensation costs will be held at 5 p.m.

THE BERKELEY VOICE
Friday, July 11, 2003

Plan to pave creek angers neighbors

Lab wants to tear up hillside, fill creek to create parking; neighbors ask council to intervene

By Martin Snapp
STAFF WRITER

They're going to pave paradise and put up a parking lot.

That's what neighbors are saying about Lawrence Berkeley National Laboratory's plans to construct a six-story facility on a hillside on its property in Strawberry Canyon.

The problem isn't the construction; it's that the hill is so steep, about 26,000 cubic feet of dirt — enough to fill more than 2,000 trucks — will have to be removed to make the ground level.

All that dirt has to go somewhere, and LNBL has decided the best place is nearby Cafeteria Creek, which will be covered by the dirt, burying about 300 feet of open creek. A 120-space parking lot for lab employees will be built on top.

Lab officials say this is the cheapest and most convenient solution, and they promise to do everything they can to mitigate environmental side effects. But opponents of the plan call it an ecological disaster. On Tuesday they turned out in force at the

See COUNCIL, Page 8

Council

FROM PAGE 1

Berkeley City Council meeting to ask for help.

"We're talking about the destruction of the hillside and the creeks," said north Berkeley resident Jim Cunningham.

His neighbor and environmental advocate Pamela Shivola added, "There used to be four uncovered tributaries feeding Strawberry Creek. This is the last one."

Daniela Thompson, a member of the Native Plant Society, told the Voice, "To fill this creek with soil would be criminal. I can't believe they're even contemplating it."

Some council members questioned what, if anything, the city can do about it — LNBL falls under the jurisdiction of the University of California. Moreover, the laboratory straddles the Berkeley/Oakland border, with 20 percent in Oakland.

"It sets a dangerous precedent," said Councilman Gordon Wozniak. "If we're going to start analyzing projects in other jurisdictions, where do you draw the line? We have many problems of our own for our staff to work on."

But the majority clearly wanted to do something.

"Just as scientific discoveries at the lab benefit people outside Berkeley, pollution knows no city lines," said Councilman Kriss Worthington. "We can't let a little tiny boundary line stop us from using our brains."

The council approved a motion by Mayor Tom Bates to appoint a city staffer to coordinate with LNBL and monitor developments. Next week, it will consider a stronger motion by Councilwoman Dona Spring to put the city officially against LNBL's plan to cover the creek, and to communicate its opposition to the lab, the state Water Quality Control Board and other state agencies.

The neighbors are hoping it won't be too little, too late.

"Time is of the essence," said Janice Thomas. "Things are happening at a breakneck speed up there."

Reach Martin Snapp at 510-262-2787 or e-mail msnapp@cctimes.com.

THE BERKELEY VOICE

FRIDAY, JULY 11, 2003

LETTERS TO THE EDITOR

Creek project risky

I have just learned of plans to fill in a seasonal creek in Berkeley with the leftovers of a Lawrence Berkeley National Laboratory building project.

It strikes me as very irresponsible and a waste of our natural resources. The valley is a thriving creek corridor that includes several coast live oaks, supports bird life and is threaded with paths made by black-tailed deer. Moreover, it provides a wildlife corridor to Tilden Park.

This proposed project seems a convenient way to cut costs for the lab, in conjunction with UC Berkeley, at the expense of more irreplaceable watershed land. Here's what the project will do:

- Bury 300 (or more) linear feet of open creek;
- Result in the removal of numerous coastal live oaks and other important vegetation;
- Actually fill in (i.e. bury) a riparian corridor with 2,000 truckloads of dirt;
- Cut away an extremely steep slope for building construction — an inappropriate building site — thus generating the dirt fill in the first place;
- Construct a new parking lot, thereby actively promoting more vehicle use, traf-

I urge this project not be approved. With all of the brain power associated with and invested in UC Berkeley, they must be able to think of a more creative use for this soil than to fill in a valuable seasonal creek, however large or small it may be.

Russell McCall

Protect natural area

I am a lifelong Bay Area resident, a student at UC Berkeley and an intern at the local environmental quarterly, Bay Nature. I am deeply concerned about the fragile ecology of the Bay Area and its high concentration of people, who are constantly threatened by earthquakes, fires and landslides.

We choose to live in this area and are aware of the risks, but a project such as the planned Lawrence Berkeley National Laboratory facility poses an unnecessary threat to the ecology of the area and its residents.

The project's plan to excavate 2,000 truckloads of dirt from a hillside is in itself a folly that should not be repeated in an area known for fires and steep cliffs. This combination provides a perfect opportunity for mudslides. The facility will bury and suffocate a thriving ecosystem, something that is rapidly disappearing in the Bay Area.

Disrespecting the hills causes visual blight, and that is something that the Berkeley hills need no more of. Look at the massive scar caused by mining in the hills above Highway 13.

Simple rules of geology and gravity dictate that when there is an unstable mass of soil on a steep slope, it will take very little for the entire mass to slide.

If the buried creek does not undermine the soil by itself, a heavy rain could cause the soil to give, and cover whatever lies beneath it: homes, roads, people and businesses. The same holds for the parking lot, to be built on fill, which liquefies in an earthquake or a deluge of rain. If the entire lot being wiped out isn't bad enough, but whatever it lands on will also be destroyed.

In addition, the hill on which the lab is to be built is so steep that terracing is required. Terracing actually increases the chances of the land above the building to slide posing great danger to the facility. It is irresponsible and incompetent of the planners to attempt to defy the laws of nature.

It is not only for the sake of the environment that I oppose the project. It is also for the sake of residents will have to deal with the consequences.

People don't want their valley filled. They do not want the threat of landslides. They do not want their hills to be covered with any more structures of any sort. We go there to walk in our parks and enjoy the only local natural areas we have.

Kristen Van Dam

Weekend Edition, July 11-14, 2003

Berkeley Daily Planet

Volume 5, Issue 30

Covering The World of Berkeley

FREE

City to Keep Closer Tabs On Lawrence National Lab

By DAVID SCHARFENBERG

City Council took steps Tuesday night to keep closer tabs on Lawrence Berkeley National Laboratory, which has clashed with city officials and neighborhood activists in recent months over a pair of large, proposed construction projects that activists say will damage the environment.

The council voted 6-2, with one abstention, to direct city staff to conduct preliminary analyses of all major planned development projects at the federal lab, which is operated by the University of California. Council also asked City Manager Weldon Rucker to appoint a member of his staff to serve as a liaison responsible for coordinating city and lab relations.

Mayor Tom Bates, who put the item on the agenda, said before the meeting that it was prompted in part by a sense that the city was caught unaware this year by lab plans to build a six-story, 94,000 square foot molecular foundry in Strawberry Canyon. The $85 million foundry would be dedicated to the study of nanoscience, the manipulation of materials at the molecular level.

City Councilmember Dona Spring also raised concerns Tuesday night about a recently announced lab proposal to build a separate, six-story office building and fill in part of a valley that includes Cafeteria Creek to make space for a 120-space parking lot.

Terry Powell, community relations officer for the lab, said she was pleased with the council's move to put a liaison in place.

"I actually think it's going to be helpful," she said. "It will help us focus and provide information through one single point of contact."

Powell said the lab informed city planning staff last fall of its plans for the foundry, but the message did not seem to make its way to City Councilmembers. Having a designated liaison will help, she said.

But City Councilmember Margaret Breland raised concerns Tuesday night about an-as-yet unnamed, overloaded staffer taking on the large job of monitoring lab activities. Bates and City Manager Weldon Rucker countered that the liaison would simply be a point of contact and would work with many others to do the work of analyzing planned lab projects.

The council also squabbled over the scope of the measure. Councilmember Gordon Wozniak, a former senior scientist at the lab, argued that it should not cover projects planned for the portion of lab-owned land in neighboring Oakland.

"I...think this is a bad precedent," said Wozniak, arguing that the city should not be spending inordinate amounts of time studying projects in other jurisdictions.

Bates joked that Berkeley studies projects all over the world, making reference to the council's predilection for passing resolutions on international issues practice that has repeatedly won national press attention, not all of it flattering.

Councilmember Kriss Worthington said it would be "foolhardy" to study only some of the projects at the lab.

"Pollution knows no fines," he said. "Radiation does not stop because there's a 'Nuclear Free Berkeley' sign on the line."

In the end, Wozniak and Councilmember Betty Olds voted against the measure with Vice Mayor Maudelle Shirek abstaining.

Weekend Edition July 18-21, 2003

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LETTERS TO THE EDITOR

SAVE CREEK

Editors, Daily Planet:

I have read the Notice of Preparation Draft Focused, Tiered Environmental Impact Report for proposed Building 49 and G4 Parking at Lawrence Berkeley National Laboratory (LBNL). I would like to take this opportunity to say that the basic design which calls for completely filling in an existing creek to put in paved parking is highly objectionable for ecological and aesthetic reasons. The statement in the notice that the project would "require the removal of several trees and other vegetation, including oak trees and some riparian plant species, from the lower elevations of the project site" is extremely disturbing to me.

Community values are reflected fairly well in the city of Berkeley's Creek Ordinance, in which such a project that covers an open creek with parking lot would be illegal. Even though LBNL does not answer to the city of Berkeley per se, I know the same values are shared by many in the university and LBNL communities.

Though there may be some people who prefer to live in totally fabricated environments and never see a tree or blade of grass, most people prefer to have some natural setting within their community space. We must be very careful in planning our buildings that we not fall into a trend of destroying every square inch of natural space around us, especially such ecologically sensitive sites as creeks.

I strongly urge you to propose improvements that will have the least impact on our natural environment. And please don't fill in a creek to make a parking lot!

Alan Gould
Member, Live Oak Codornices Creek Neighborhood Association
Employee, Lawrence Hall of Science

STOP THE INSANITY

Editors, Daily Planet:

I am appalled that Lawrence Berkeley National Laboratory (LBNL) and UC Berkeley plans to bury Cafeteria Creek and its valley and destroy part of a hill on LBNL property for a construction project for a new building and parking lot. People have done enough damage to the environment and have destroyed most of the creeks in the Bay Area. When is this insanity going to stop. There are alternative sites. They can clean up their unused building sites for their project instead of contributing to the further destruction of natural open spaces where other species live.

Please don't let this anti-environmental project happen.

Barbara Beth

SAVE STRAWBERRY CANYON

Editors, Daily Planet:

Please fight to save Strawberry Canyon from the planned overuse of this magnificent canyon by the university and LBNL. As longtime residents of Berkeley, we have many times gone for walks in the Berkeley Hills and enjoyed the riparian atmosphere of that whole region. It would be a shame to see it lost. Also, the destruction of habitat for the abundant wildlife in the creek area would be unforgivable.

Please do whatever you can to save this beautiful resource.

Stephanie Manning

RESPECT CREEK ORDINANCE

Editors, Daily Planet:

The following letter was addressed to Jeff Phillliber, environmental planning coordinator, Lawrence Berkeley National Laboratory:

We are writing to express our strong opposition to the proposed project that will result in the filling of a portion of Cafeteria Creek, a tributary of Strawberry Creek. Filling of creeks to minimize construction costs and building parking lots in creeks are completely unacceptable in the year 2003. The city of Berkeley has a creek protection ordinance that is intended to protect the creeks in the city of Berkeley. Even if not bound legally by the ordinance, we expect that the University of California would want to be a respectful "resident" of the city by complying with the letter and spirit of the creek ordinance. We are dismayed that the university would even conceive of such a project.

We strongly encourage Lawrence Berkeley National Laboratory (LBNL) to select an alternative that does not involve the destruction of a hillside and a creek. Other sites/existing buildings within LBNL, on the UC Berkeley campus, or in the city of Berkeley may be more easily used (and will be less environmentally destructive) for the additional office space identified as needed by LBNL. Your proposal does not present any more compelling rationale for the proposed project than cost and convenience. Such arguments are no longer an adequate basis for the destruction of natural habitat areas. The need to dispose of 26,000 cubic yards of hillside in the cheapest, easiest way is no longer adequate rationale for filling wetlands.

Please rethink your proposal and abandon the preferred alternative. Your proposal is not the least environmentally damaging alternative and flies in the face of the California Environmental Quality Act (CEQA). We hope you will rethink this project and choose an environmentally acceptable alternative.

Strawberry Creek Affinity Group:
Fran Berges, Jane Eiseley, Nina Falk, Jane Kelly, Tom Kelly, Christopher Kroll, Bob Marsh, Patti Marsh, Fran Rachel, Eric Roberts, Carol Thornton, Christine Walter

Continued on Page Nineteen

THE BERKELEY VOICE
Friday, July 18, 2003

COUNCIL ROUNDUP

City remains out of creek controversy

STAFF REPORT

Opponents of Lawrence Berkeley National Laboratory's plan to cover a small creek in Strawberry Canyon with 2,000 truckloads of dirt from a nearby hillside were disappointed when the City Council declined to take a strong stand against the project.

The Council unanimously approved a mild letter to LBNL, reminding the lab of the city's longtime concern about environmental pollution. But by a narrow 5-4 vote, it rejected a stronger letter that would have placed the city firmly in opposition to the plan.

But that may not be the end of the story. Several council members who voted against the stronger letter said it was the timing, not the content, they objected to.

"We can come back and revisit this in the fall, after our staff has had a chance to make a report," said Councilwoman Miriam Hawley.

Weekday Edition, July 22-24, 2003

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Volume 5, Issue 33

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Weekday Edition, July 22-24, 2003

COMMENTARY

Lab Stewardship Includes Caring for Creek

The following letter was addressed to Jeff Philliber, environmental planning coordinator, Lawrence Berkeley National Laboratory:

Within the last seven months—and with shock and awe—we've watched how the lab rapidly secured UC Regent approval for a six-story nanotechnology facility (aka "Molecular Foundry") in Strawberry Canyon with an absolute minimum of environmental disclosure and public scrutiny.

Now it's like déjà vu all over again. At least this time we've had a notice of preparation and initial study (NOP/IS) to study and a public scoping meeting (June 30) and site tour (July 7) to attend.

Yet we still can't believe that LBNL's project stewards are truly serious about transforming this latest pair of mega-proposals into reality. After all, the lab still describes itself as a world-class institution, doesn't it?

We have no reason to doubt the assertion that many of the lab's 4,200 employees are cramped for space. Nor do we doubt that many are frustrated by the lack of parking near their job sites. But are these inconveniences sufficient to justify excavating 26,000 cubic yards of material from a steep slope to build an office tower (Building 49) and to dump the residuals into a nearby Strawberry Creek tributary to create a 95-plus-space (G-4) parking lot?

To us, the underlying rationale for Building 49—that the lab fails to meet federal space allocation requirements—appears bogus. Does LBNL face any penalties if lab space doesn't match up with the figures recommended by the General Services Administration (GSA)? How much would the lab's existing space/employee figures be altered by transferring 240 existing employees into the proposed Building 49? How many more such buildings would be required to meet GSA specifications under current conditions?

The NOP/IS promises that the EIR will examine alternative on-site or off-site locations for this "decompression" office space. If only that were so. In our experience with UC-sponsored CEQA exercises, the alternative "straw men" are routinely flattened by the "preferred alternative"—the one selected before a notice of preparation and initial study are ever drafted.

Moreover, we wonder how far the lab's preferred alternative would fly without the "unique" risk-bearing contribution of the consortium of private companies who plan to finance, design, construct, own and manage Building 49.

As unconscionable as we find the proposal to transform a riparian corridor into a parking lot, we are equally appalled by the precedent emerging here. Will public university land increasingly become the domain of private developers via clever lease-back arrangements?

Above all, we are struck by the incredible waste of human resources that this whole process represents. Grown (and presumably well-paid) men and women in 21st-century Berkeley are spending inordinate amounts of their time and energy to advance a pair of projects which are at odds with clear thinking and good watershed management.

It is as if the university is determined to return to the bad old days of the last century when Memorial Stadium blasted its way into the mouth of Strawberry Canyon. Have the intervening 80 years taught UC nothing about the importance of site stewardship?

Our hope is that public reaction to this NOP/IS stimulates sufficient introspection within UC and LBNL that an EIR won't be necessary and that the projects as proposed will be withdrawn quietly.

It's not impossible. After all, we recall that the NOP/IS for an EIR on LBNL's long-range development plan (2002) was issued in October 2000. More than 1,000 days later, we have yet to see a follow-on document.

Daniella Thompson, James M. Sharp

Weekday Edition, July 29-31, 2003

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FREE

LETTERS TO THE EDITOR

Message for LBNL: Consider Alternatives to Creek Infill

The following letters were addressed to Jeff Philliber, environmental planning coordinator, Lawrence Berkeley National Laboratory.

I am writing on behalf of the Ecology Center in Berkeley to provide comments on the Lawrence Berkeley National Laboratory's Notice of Preparation, Draft Focused, Tiered Environmental Impact Report on the Construction and Operation of Building 49 and G-4 Parking Lot.

The Ecology Center strongly objects to this project in its current form. Particularly problematic is the portion of the project that would dispose of excavated soil by filling in the riparian corridor known as "Cafeteria Creek." The project appears to be in violation of Berkeley's Creek Ordinance and would destroy sensitive riparian habitat for wildlife such as deer and bird species, and remove large, mature native trees. Cafeteria Creek is a rare and valuable stretch of unaltered riparian habitat and an important and natural tributary to Strawberry Creek.

We believe that the proposed building site would produce excessive amounts of soil because of the steep slope on which the building would be constructed. We suggest that LBNL choose another, flatter site that does not require excavating a hillside, and that would generate less soil. Further, we suggest choosing a different method for soil disposal, such as delivering it to a disposal company for reuse as clean fill.

Additionally, the area to be filled by the parking lot includes several coast live oaks, supports considerable bird life and is threaded with deer paths. We would suggest that LBNL find alternatives to building another parking lot. Rather than relying on increased parking capacity and increased single occupancy vehicular traffic to meet transportation needs, we would suggest increasing carpooling efforts and providing increased shuttle services.

Since there are feasible alternatives to destroying this riparian corridor, we ask that you revise your project plan accordingly.

Martin Bourque
Executive Director
Ecology Center

•

I am writing on behalf of the Friends of Baxter Creek (FOBC), a 950-member-plus organization whose mission is to preserve, restore, protect and advocate for Baxter Creek and neighboring watersheds. FOBC believes that protecting creeks is essential to the livability of our community. Our Web site can be found at http://www.creativedifferences.com/baxtercreek.

FOBC objects to the proposed project to construct an office building and parking lot and dispose of the fill from construction by burying a natural-flowing creek. People who know the creek say that it runs much of the year, that its banks are densely vegetated with riparian plants and mature coastal live oaks, and that it supports abundant wildlife by providing water, shade and food, and creating a natural habitat corridor. As we understand it, the project is proposed on a steep slope that would necessitate substantial grading and fill, and could likely create soil instability and drainage problems in the area.

Environmental analysis of the project should emphasize the many benefits to wildlife that creeks and the surrounding natural areas provide. To cite just a few examples, migrating songbirds use creeks in urbanized areas to stop and refuel. In its Water Quality Control Plan for the San Francisco Bay (Region 2) published June 21, 1995, the California Regional Water Quality Control Board, San Francisco Bay Region, states that the two most important types of wildlife habitat are riparian and wetlands habitats. According to the California Oak Foundation, many species of animals rely on oak woodlands for their sustenance.

FOBC believes that alternatives exist to the proposed construction and fill in the creek and destruction of adjacent oak woodlands. Sites that have existing buildings capable of being renovated or expanded, or sites that would involve less grading and destruction of vegetation and wildlife should be chosen over a site with a natural-flowing vegetated creek and surrounding habitat corridor.

Caitlin Smith
El Cerrito